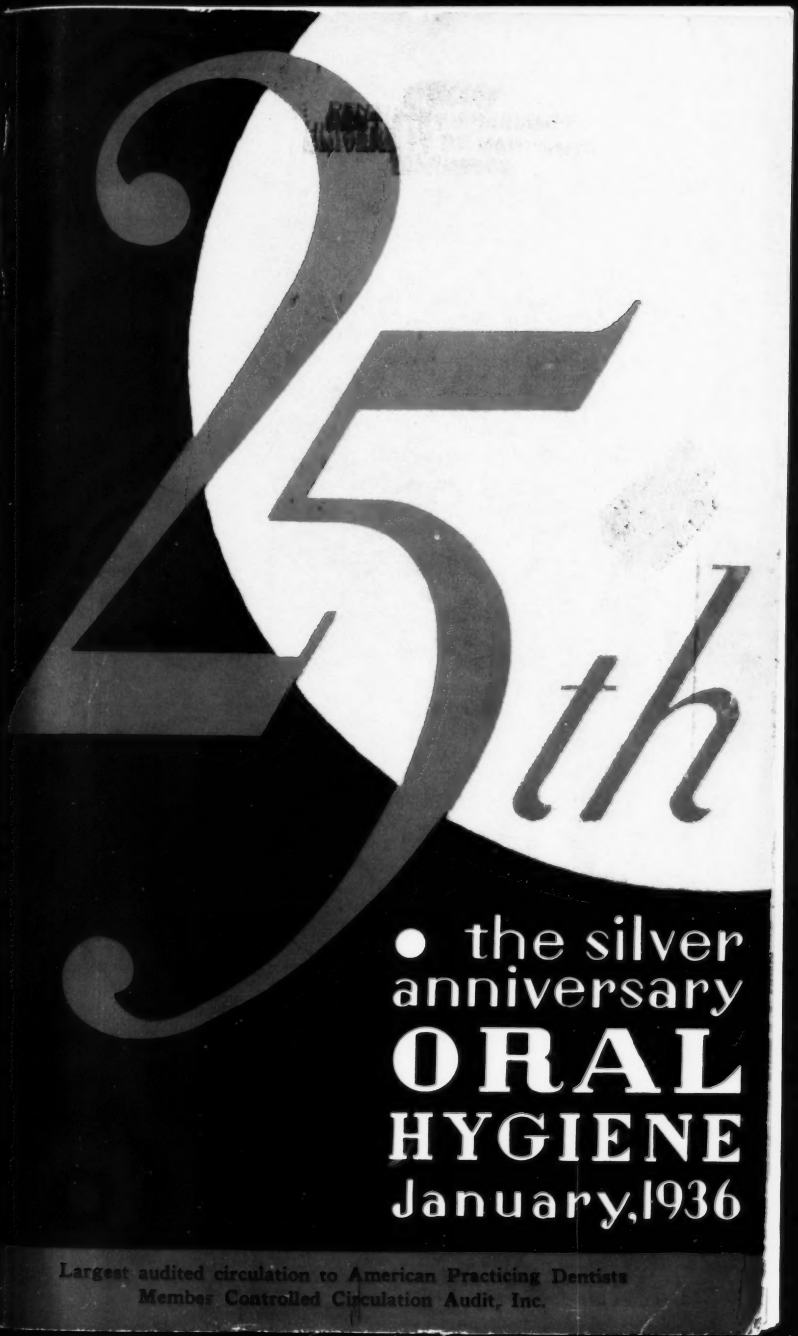
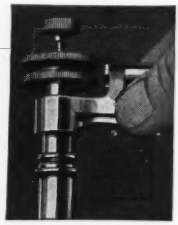

25th
• the silver anniversary
ORAL HYGIENE
January, 1936
Largest audited circulation to American Practicing Dentists
Member Controlled Circulation Audit, Inc.

Sani-Jerry

True-Running and Smooth in Operation

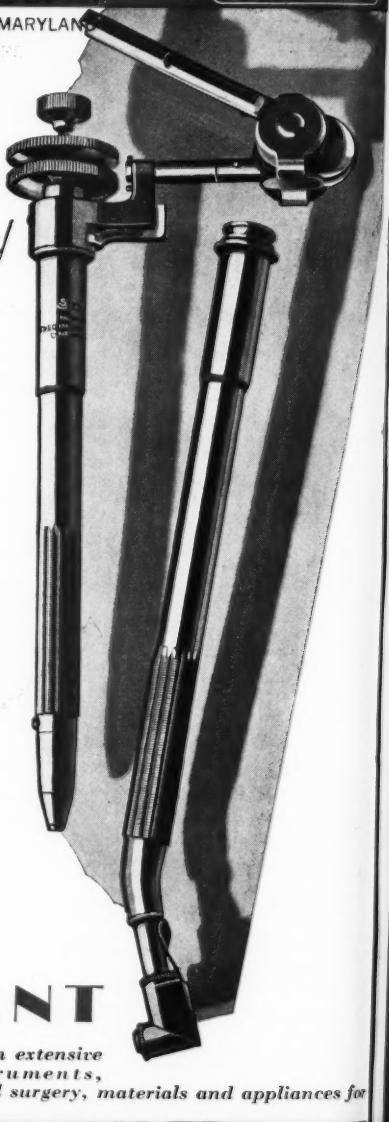
Sani-Jerry Handpieces

reduce the strain of dental operations for both dentist and patient.



The latch removal of the sheath of the Sani-Terry Handpiece and its automatic lock are time-saving and convenient.

A long, parallel bearing at the front of the spindle is one of the special features which increases resistance to wear.



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In Oral Hygiene for January, 1911, The Cleveland Dental Manufacturing Company wished the dental profession a "Happy and Prosperous New Year." In 1936 an organization whose growth has kept pace with the progress of the dental profession repeats that wish.

For

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phenyl-dimethyl-isopropyl-pyrazolon

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Larodon is the outcome of chemical, pharmacological, and clinical research undertaken and perfected by Roche scientists in answer to the many requests from dentists for a new analgesic, an analgesic that can be depended on for quicker action without sacrifice of safety.

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PAIN FOLLOWING DENTAL WORK

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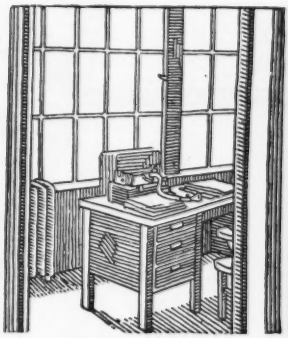
NUMBER 174

The Publisher's CORNER



By MASS

■ The bird on the bough sings tweet tweet, but the puma on the bough says little, just pounces. ORAL HYGIENE's editors are pumas—but talkative ones. They keep themselves in physical trim by pouncing on us here in the publication office, springing handily from the erudite plane upon which they lurk. Upon these heights they lie betimes, filing their claws, gazing down upon us, watching for derelictions. The cut of Doctor Lyons is too small; the blue ink on those cartoons is terrible; these subtitles *have* to go in whether there is room or not; kindly kill the proofreader; your big idea is terrible.

This department's ideas stir them most. The most vigorous pouncing takes place when you look up, starry eyed, bubbling with a new idea, and tell it to the pumas. A few months ago it was the idea about this Silver Anniversary ORAL HYGIENE—rapturously visualized here as an issue dripping with articles about O.H. itself, tributes from friends, records of journalistic achievement—in fact, the sort of issue we got out five years ago, and ten years ago, on previous birthdays. A grand chance to tell about ourselves, print our own pictures as we did then, and generally do a little genteel posing before the mirror of print.

Then the pumas pounced, tore the beautiful idea to shreds, talked a *very* great deal, and sprang back to their bough, muttering throatily. Up there they stayed a while busily conferring, and presently shouted down

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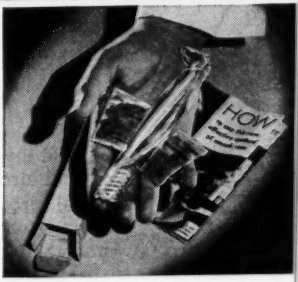
HAS BASE-END CUT WILD BOAR BRISTLES-COSTS 50c RETAIL

IN PROFESSIONAL KIT

ONLY 15c



This kit only 15c. Contains: One Calsodent Brush, retail price 50c; two packets Calsodent; 12-page handbook on massage brushing.

NOW, for less-than-cost, you can get the brush you need for chair massage treatments and for instructing your patients in massage brushing. This Calsodent Brush, regular price 50c, is a part of the kit offered *to the profession only* for 15c. Designed by two well-known periodontists, this brush is the ideal massage brushing tool. Bristles are imported Chungking wild boar bristles—only the choice base-end cuts are used. They are stiffer, tougher, longer lasting . . . keep their resilience when wet. Tufts are spaced to penetrate into interproximal areas, and arranged across brush to give broadside stiffness vital to all massage brushing techniques.

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Please send me ..... Demonstration Kits at your special price to dentists of 15c each. Each kit is to contain a regular 50c Calsodent Brush with imported, base-end cut, Chungking bristles. ☐ Check enclosed. ☐ Send C.O.D.

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☐ Also send me, free of charge, your 20-page portfolio describing methods found most effective for instructing patients in massage brushing.

their idea, an anniversary number not about ORAL HYGIENE's first quarter-century but about *dentistry's* last quarter-century—and here it is: a compact little history of the *profession's* progress and significant developments since that January day in 1911, when Linford Smith first saw the first issue of this magazine. But nothing about the magazine itself; nothing about us boys and girls. . . .

And maybe the pumas are right. Anyhow, they had their way, they always do. Independence is their boast, never mindful what it costs in broken publication office hearts. But perhaps no reader's heart will be broken because he is deprived of reading about ORAL HYGIENE's own quarter-century, with a multitude of details regarding the first issue which carried only half as many pages, and circulated thirty thousand fewer copies.

We'd love to tell about that, about the growth in size and in circulation since then, about the numerous editorial projects undertaken through the years, about depression tribulations, about the folks who make the magazine, about *Spanish Oral Hygiene*, about starting the new *Dental Digest* and guessing wrong about the corner prosperity was around—and the interesting (to us, anyway) anecdotes about ORAL HYGIENE's founder Linford Smith and the first editor, Ed Hunt, his successor Doctor Belcher, and Arthur Smith, and about Rea McGee, editor *emeritus* now and the most interesting man on the planet to spend an evening with, or a week, or a month. And about old Doctor Puma, the present editor.

At home, when I start to reminisce, my lad often stops me. "Are you going to tell about *that* again?" If the pumas hadn't pounced maybe you readers would be feeling like my boy does when Pap pokes around in the pigeonholes of memory.

At that, the story of ORAL HYGIENE has often been told in these pages. Because nobody stopped me I went to town with it five years ago, after having gone to town with it only five years before. So maybe the pumas are right; and maybe you're glad they saved you from an old man's maunderings by chawing to little pieces his cherished (but not so new) idea for this Silver Anniversary ORAL HYGIENE.

But this *is* an interesting place, and helping to make

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Every batch of any shade will always produce exactly the same shade.

In Tenacin you have an entirely new cement. You will like its easy-working properties. And its new true tooth colors match natural teeth. These colors are printed on a convenient card, which you will be glad to have.

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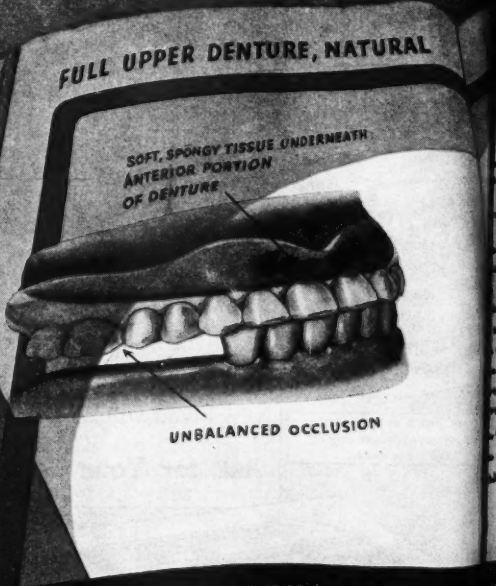

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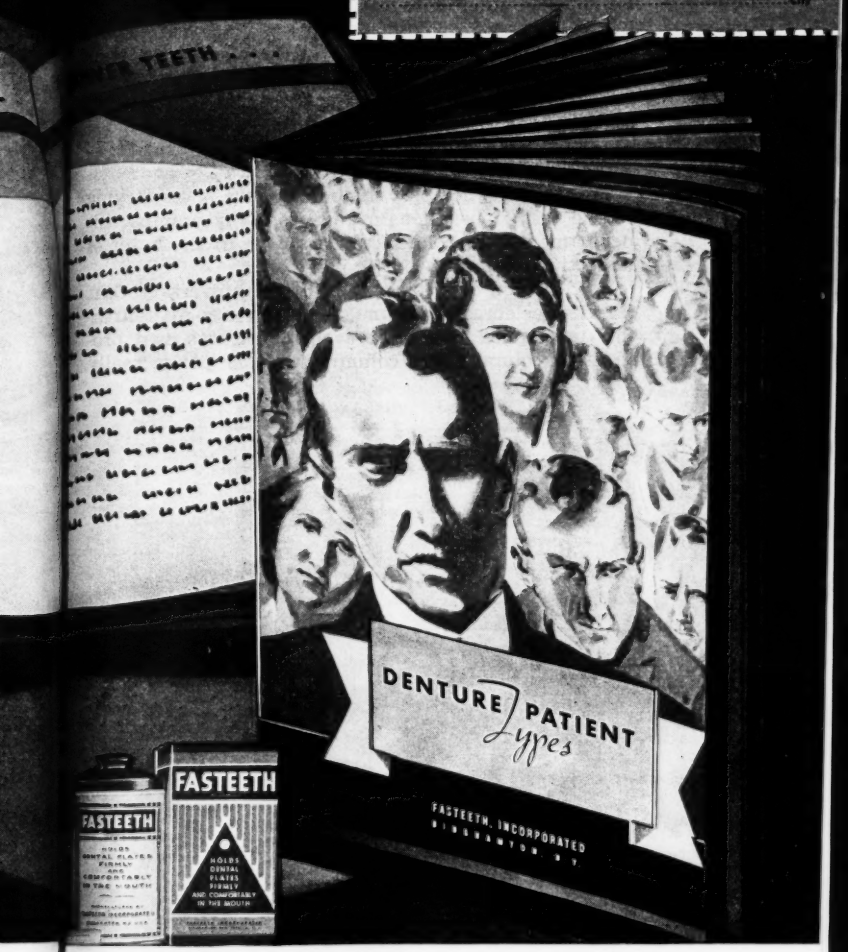

Th[illegible]LKALINE *Denture Powder*

this magazine through the years has been an interesting job and I would have liked to tell it—again.

The very first ORAL HYGIENE I ever saw was one of the first year's issues back in 1911, in high school days. I happened to pick it up in the office of Dr. Ernest Pieper, out in San Jose, California. Five years later, by a peculiar train of circumstances, I became a staff member here in Pittsburgh, full of publishing confidence based on a year's experience running a high school paper. (In about two days the confidence folded up.) But that's been told, too, in an earlier CORNER, so let's say no more about it.

This modesty complex the pumas have is very trying to the rest of us, though, and especially cramps this department, which has for years been in the habit of dissecting its soul in public print.

So here you are, folks, the Silver Anniversary ORAL HYGIENE, celebrating the magazine's twenty-fifth birthday in a quiet way, celebrating dentistry's own progress in column after column. It's *your* party, really.

S. S. WHITE ZINC CEMENT

has the highest crushing strength of all cements at the period when a cement needs strength most—*during the first hour after set.*

See the report of the Research commission of the American Dental Association, "Zinc Phosphate Cements: Physical Properties and a Specification." *The Journal of the American Dental Association, November* 1934. S. S. White Zinc (oxyphosphate) Cement is indicated by the letter F. Kryptex is indicated by the letter Q.

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One hour after set S. S. White Zinc Cement showed an ultimate compressive strength of 9,245 lbs. per sq. inch—the highest crushing strength of all zinc phosphate cements tested, at the period when a cement should be strong—during the first hour after set of the filling, inlay or other restoration. And from the first hour onward, Zinc Cement continues to gain in strength until it will resist an ultimate compressive strength of 13,797 lbs. per sq. inch one week after set.

Summary of Detail Requirements of A. D. A. Specification No. 8 for Dental Cementing Medium.

Consistency of Mix	Time of Setting at 99° F.		Ultimate Compressive Strength		Film Thickness	Disintegration
	Min.	Max.	Min.	Min.	Max.	Max.
	Minutes	Minutes	1 Hour	7 Days		
			Kg. sq. cm.	Kg. sq. cm.	Microns	Per cent by weight
Disk	4	10	350	840		
30± 1mm. in diameter			(lb. sq. in.) (5,000)	(lb. sq. in.) (12,000)	50	1.0
S. S. WHITE ZINC CEMENT 34± 1 mm. in diameter		6	9,245	13,797	40	0.14

5/3 PACKAGE ZINC CEMENT AND ACCESSORIES

1 each—1 oz. Powders Nos. 1 and 5
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3 —Liquids
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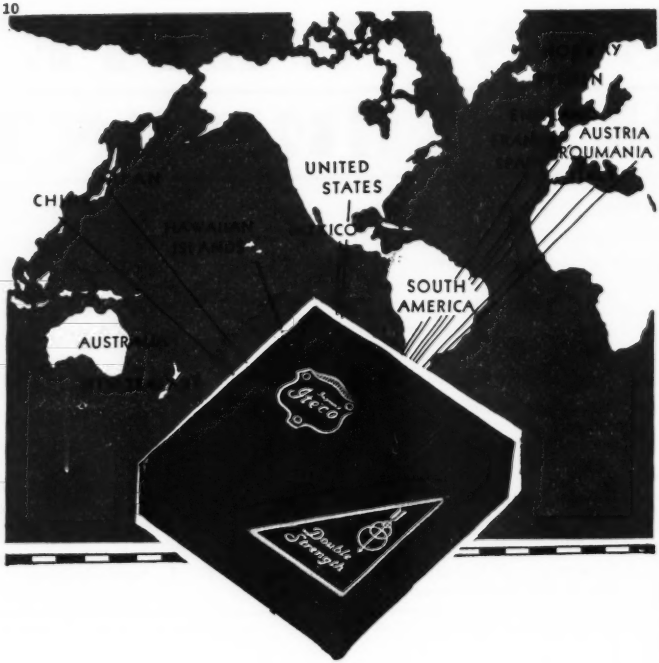

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Double Strength

THE ORIGINAL CONDENSATE

ITECO LABORATORIES, Portland, Oregon—Please send complete details about Double Strength ITECO

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FOCUS No. 1
Periapical infection is the most frequent oral focus infection.

When Treating Oral Foci Of Infection

COMBAT SYSTEMIC INVOLVEMENT WITH SAL HEPATICA

PERIAPICAL infection, pyorrhea, etc., with absorption and swallowing of pus containing bacteria, often causes disease of the stomach, bowels or gall-bladder. (Daland in Dental Health in the Prevention of Disease.)

Retard possible systemic involvement by the routine use of Sal Hepatica. This scientific combination of aperient salines does a two-fold job.

(1) By safe and effective cleansing of the bowels, it rids the body of accumulating toxins and bacteria.

(2) It combats acidity by helping to maintain normal alkaline reserve. A state of well being is promoted and the system's defensive mechanism is strengthened.

Sal Hepatica closely approximates, in its components and their ratio, the most famous natural aperient waters. It makes a sparkling, pleasant-tasting, effervescent drink, creating gentle osmosis for laxation or cathartic effect.

The coupon will bring you samples of Sal Hepatica and literature.

SAL HEPATICA CLEANS THE INTESTINAL TRACT AND COMBATS ACIDITY

COUPON

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Please send literature and clinical supply of SAL HEPATICA.

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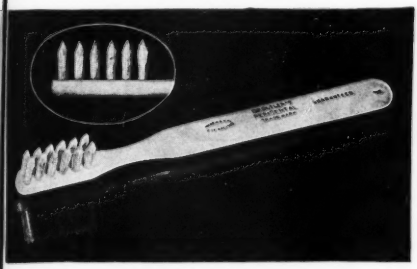
DR. BUTLER TOOTH BRUSH

● over its nearest competitor, and recommended it more times than 17 of the 20 brushes added together.

DR. BUTLER BRUSH	215
2ND BRUSH	117
3RD BRUSH	103
17 REMAINING BRUSHES	164

Established in the survey (report D 3935) made by the Statistical Research Bureau, an impartial fact finding organization, this Fall among the dentists of Cleveland, Ohio—a typical American city.



Here's the Reason . . .

the Ideal Cleansing and Stimulating Agent

The DR. BUTLER BRUSH is designed for SERVICE

The Butler Brush has a large straight handle which can be firmly grasped and two rows of tufts which permit easy interproximal stimulation and cleansing. Bristles and all materials entering into its construction are the best the market affords. Have you added your name to that ever growing and outstanding list of members of the profession dispensing or prescribing the BUTLER exclusively?

Compare my brush

One only Dr. Butler Brush for your own Personal Use.

Sent for only the cost of packing and shipping. Send 20c today! . . . use coupon . . . indicate bristle, please.

JOHN O. BUTLER COMPANY
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Enclosed find $ .20 for one brush.
( ) Medium Bleached. ( ) Hard Bleached. ( ) Extra Hard Bleached. ( ) Hard Unbleached. ( ) Extra Hard Unbleached. ( ) Junior (Child's Brush).

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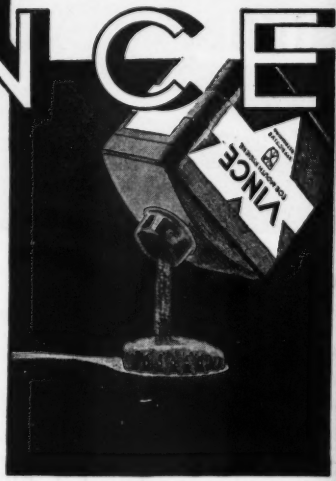
Dissolved in a glass of water, a teaspoonful of Vince makes a refreshing, antiseptic, alkaline mouthwash and gargle. Moisture quickly releases nascent oxygen from Vince and renders it destructive to germ existence, without damage to the oral tissues. Being alkaline in reaction, Vince neutralizes the acid condition of the oral cavity, making it an unsuitable ground for the micro-organisms which thrive in such medium. It liquefies tenacious secretions; it cleans and deodorizes.

VINCE

Vince is recognized as a specific in the treatment of Vincent's and other types of oral infection. It is equally efficient against aerobic and anaerobic organisms. Well-suited for office treatment, as an easily prepared paste, and for home treatment as a dentifrice, mouth-wash and gargle. Dental plates and other dental appliances are easily cleansed with Vince and may be kept immersed in a solution of Vince overnight.
Literature and a trial supply gladly sent upon request.



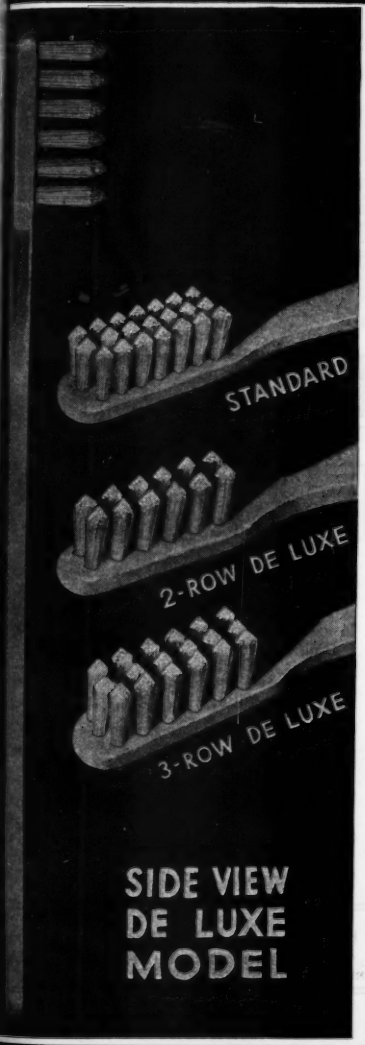
VINCE AS A TOOTHPOWDER

VINCE LABORATORIES, INC., 117 West 18th Street, New York City

Why TAKAMINE TOOTHBRUSH

HAS EARNED THE REPUTATION AS

"The Dentist's Personal Toothbrush"



- ★ FINEST QUALITY BRISTLES
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- ★ PROPERLY CUT FOR INTERDENTAL BRUSHING
- ★ LOW COST ALLOWS FREQUENT RENEWAL
- ★ EASILY STERILIZED

The TAKAMINE Toothbrush was designed after the specifications of the world's leading Periodontists for interdental brushing and massaging. Three types are offered for your prescription. Send coupon now for TRIAL OFFER to the Dental Profession.

SEND 15c for 2

TAKAMINE CORP.
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Enclosed 15c covers shipping of Initial Trial Offer of ONE TAKAMINE Standard and EITHER ONE of the two DE LUXE Models. (Please check type).

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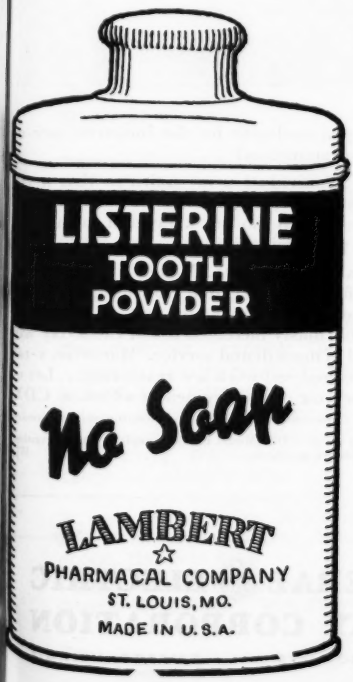
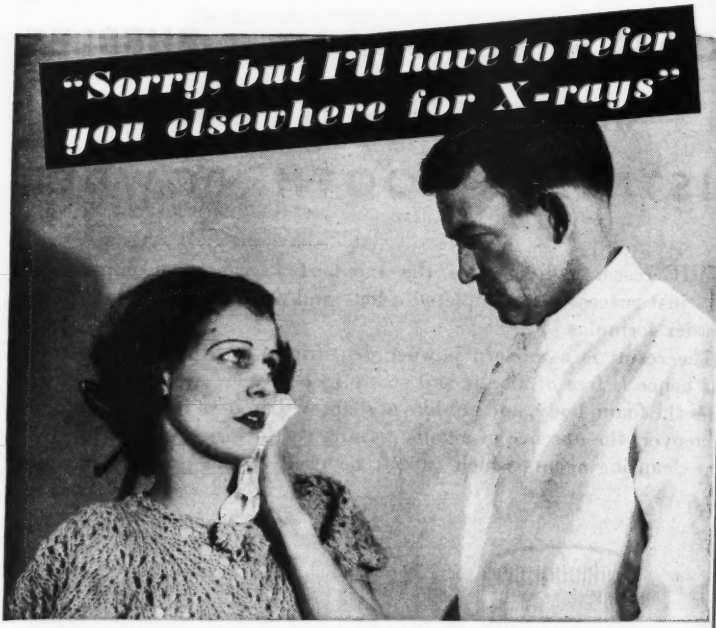
THE research division of the Lambert Pharmacal Company has just successfully completed a long and painstaking study of tooth powder formulas.

The result is a modern powder dentifrice which contains no soap, and hence is free of alkalis and soapy taste. A new scientific ingredient gives the foam, body, and bubbles of soap; with none of its disadvantages. Moreover, the absence of alkalis permits the inclusion of certain excellent cleansing agents which cannot be used in the presence of soap.



A Professional Size sample will gladly be sent to Dentists who request it on their letterhead. Address: Lambert Pharmacal Company, Dental Dept., 2101 Locust St., St. Louis, Mo.



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With more and more dentists installing individual x-ray units, so that x-ray films may be obtained while the patient is in the chair, the absence of x-ray facilities is becoming increasingly noticeable. A modern x-ray unit in the dentist's office is conclusive evidence of his progressiveness.

The wall-mounted CDX, within arm's reach every working minute of the day, is a boon to progressive dentistry. Its shock-proof, thoroughly reliable operation is due to oil-immersion of the *entire* high voltage system, *including the x-ray tube itself.*

With a General Electric CDX, Model E dental x-ray unit in your office you will gain a growing appreciation among your patients for this added service and convenience. Your obviously increased use of the x-ray will reveal the need of more dental service. Moreover, x-ray check-ups on completed work are reassuring... Let us show you how you can conveniently afford a CDX.

Please send catalog on the CDX-Model E. Also explain your convenient deferred payment plan of purchase.

Name.....

Address..... *City*..... *State*.....

GENERAL ELECTRIC X-RAY CORPORATION

2012 JACKSON BLVD. CHICAGO, ILLINOIS

Vol. 26, No. 1 **January, 1936**

ORAL HYGIENE

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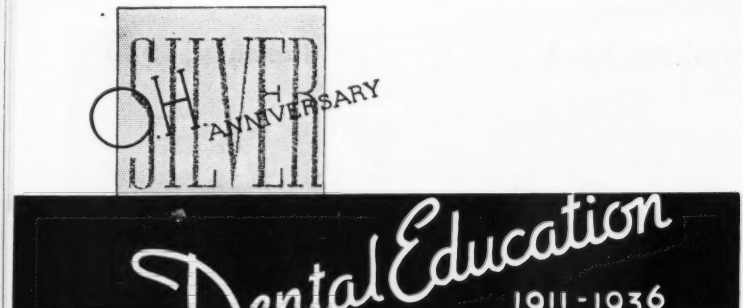


■ Before recording or attempting to understand the development of dental education in the last twenty-five years it is necessary to sketch in a background of the earlier development of professional education in America. The professions of medicine and dentistry have followed the same road, only one a little in advance of the other. Both have experienced the same trials, have survived the same crudities, and have been guilty of the same crimes against society and the students.

In earliest Colonial America all the professional men came across the Atlantic from Europe where they had received their professional education. Many of these men were of superior intelligence, well educated, and often possessed of good libraries. Most of the people were too poor to send their sons to England for education and professional training, and so the well trained physician took promising young men to ride with him on his calls to his patients; and to assist him in his office; to study the science; and learn to practice the art of medicine.

A group of men trained in the schools of Edinburgh organized the first medical school in Philadelphia in 1765. As the population spread westward and the need for physicians increased, other groups of men formed medical schools. A more or less suitable place was selected for lecture and class rooms. As a rule, one physician assumed

the responsibility of teaching one branch of medicine. Students were enrolled for two short sessions in the winter; there was little or no clinical instruction; and in the summer the students got what clinical experience they could with private practitioners. Many of these institutions were as good as conditions would permit and were conducted by sincere and honest men, but the demand for physicians furnished the opportunity for the commercially minded, and so the proprietary medical school preceded the proprietary dental school. It is difficult for us to realize today the deplorable conditions in some of these schools. At length they became so serious a menace to public health and welfare that the Carnegie Foundation made the survey of medical education, and the American Medical Association undertook the clean-up.

Improvement in medicine came before that in dentistry for two reasons: First, the accent in medical education had been on the application of scientific laboratory training to clinical practice; scientific laboratory training was expensive; and required expensive equipment. The accent in dental education had been on the acquirement of technical skill in inexpensive laboratories with the student furnishing the equipment. Therefore the cost of medical

FREDERICK B. NOYES, A.B., D.D.S., Sc.D.

education mounted more rapidly than that of dental education. Second, in the medical school clinical services were free, and consequently the only source of income for the school was tuition of students; in the dental school fees were collected for the clinical services rendered by the students, and this produced a much larger income than that from tuition fees. For these reasons it earlier became impossible to conduct a reasonably decent medical school with the necessary laboratory equipment and facilities on the income from tuition fees, and it was necessary to find the assistance of private endowment or state support. The difference can be better appreciated in the light of this instance in which the owner of a proprietary dental school sold his institution to a large university for what was, in those days, a large

sum. The previous owner was by contract to be continued as business manager, and he was to receive a salary of $5,000 or more a year, was to pay himself the purchase price out of the income of the school in a term of years during which the college was to be no expense to the university. Recalling these conditions makes it easy to understand why the Carnegie survey for medicine preceded the survey for dentistry by ten or fifteen years.

FIRST DENTAL SCHOOL

Before the organization of the first dental school in 1840 all physicians did what they could to relieve dental pain and suffering, and many of the men who limited their practice to dentistry had come to the practice of dentistry through the practice of medicine, and some of them were medically educated. In the early years of the dental school most of the members of the faculty had the medical degree; for instance, in the original faculty of the Missouri Dental College in Saint Louis all but two members of the faculty had either the medical degree or both medical and dental degrees. More important, however, was the fact that the medical subjects in the dental curriculum were taught in the same way and given approximately the same importance as in the medical school. The development of technical skill and the emphasis on restorative processes, following the introduction in 1888 of technique courses in operative and prosthetic dentistry, led to the supremacy of American dentistry which was based on the ability to maintain the integrity and efficiency of the denture by skilled restorative processes. The value of this service in the preservation of health should never be lost sight of, but little of this work was conducted on the basis of diagnosis and treatment of disease. One of the factors which led to a change in point of view was the announcement in 1895 by Doctor G. V. Black of the principle of extension for prevention. This doctrine changed the philosophy of filling teeth from that of replacing lost structure by indestructible material to that of a therapeutic measure for the treatment of a disease. By the old philosophy "a tooth after proper filling was no more liable to caries than it would have been if it had never been attacked"; in the new philosophy, after the proper restoration had been inserted the tooth was less liable to attack of the disease than it had been originally, and under ordinary circumstances would never again be attacked in that place. Other factors were the development of the fundamental sciences, the extension of bacteriology

and its application to clinical procedure, the application of histology and histopathology to practice, the increased interest in and growing importance of oral surgery and orthodontia and later the emphasis on focal infection, nutrition, the vitamins, and the endocrines.

INTERNAL PROBLEMS

A few anecdotes may recall more vividly the conditions in 1910 and before. In the nineties a young man came to Chicago from the west; he was well educated, had taught in one or two institutions; and had had thrilling experiences in California. He thought of practicing dentistry and entered one of the proprietary dental schools in Chicago. The dental students were not much interested in the fundamental sciences and were as eager as the medical students to get into the clinic where they could try their skill on patients for weal or woe. The owner of the school had engaged several men to lecture on chemistry, but each in turn had met with the same fate: before his first lecture was over the students arose from their seats, picked up the professor, carried him to the front door, and tossed him into the street.

The young man from California went to the dean of the school, who was also its owner, and said, "I understand you would like to have a man teach chemistry." The dean replied, "Yes, why?" The young man said, "I would like the job." The dean said, "Can you teach the class?" The young man said, "I have taught chemistry, and I can teach the class." The announcement of the first lecture was made on the blackboard; at the appointed hour the members of the class were seated in their places, the bell struck, and the young man with hair as black as ink, eyebrows b l a c k and heavy, and eyes, that could, on occasion, flash fire, stepped up to the rostrum, laid a six-shooter on each side of the reading desk and said, "Gentlemen, you will keep your seats." The lecture on chemistry progressed without interruption. This was in Chicago in the nineties.

THE SCIENCES

In many of the best dental schools the fundamental sciences were well taught by competent men, but there was little insistence on their acquirement by the students. In many institutions a student would be recommended for graduation if he passed well in operative and prosthetic dentistry, although he might have failed entirely in one or more of the theoretical subjects. I recall an instance in which anatomy was taught by one of the finest teachers of anatomy in the middle west. His point of view was

TABLE I
NUMBER OF DENTAL SCHOOLS IN ACTUAL OPERATION IN CONTINENTAL UNITED STATES EACH YEAR SINCE 1840*

Year	Number of Dental Schools	Year	Number of Dental Schools	Year	Number of Dental Schools
1840	1	1872	10	1903	55
1841	1	1873	10	1904	56
1842	1	1874	11	1905	55
1843	1	1875	11	1906	55
1844	1	1876	11	1907	55[4]
1845	1	1877	11	1908	55
1846	2	1878	12	1909	56
1847	2	1879	12	1910	54[5]
1848	2	1880	14	1911	54
1849	2	1881	15	1912	52
1850	2	1882	18	1913	51
1851	2	1883	19	1914	48
1852	2	1884	21	1915	49
1853	4	1885	22	1916	49
1854	4	1886	23	1917	46[6]
1855	4	1887	26	1918	46
1856	4	1888	29	1919	46
1857	3	1889	29	1920	46
1858	3	1890	31	1921	45
1859	3	1891	34	1922	45
1860	3	1892	35	1923	45
1861	3	1893	37	1924	43[7]
1862	4	1894	41	1925	43
1863	4	1895	44	1926	44
1864	4	1896	48	1927	40
1865	4	1897	50[1]	1928	40[8]
1866	4	1898	54	1929	40
1867	7	1899	54[2]	1930	38
1868	8	1900	57	1931	38
1869	10	1901	57	1932	38
1870	10	1902	56[3]	1933	39
1871	10			1934	39

*Sources: Year 1840 and 1841: Gies, W. J., Bulletin 19, Carnegie Foundation for Advancement of Teaching, page 251. Years 1842-1925: Polk's Dental Register and Directory of the United States and Canada: 1925, Chicago, R. L. Polk & Co., page 35, 1925; Gies, W. J.: Additional Remarks on a Reference to the Carnegie Foundation's Study of Dental Education, J. Dent. Research 10:32 (February) 1930. Year 1931: Greenleaf, W. J.: Dentistry, Careers Series, Leaflet Number 7, Washington, D. C., Office of Education, pages 7-10, 1931.

Note: The figures on the number of dental schools in actual operation are unfortunately not strictly comparable. Those obtained from Doctor Gies and Doctor Greenleaf refer to the number of dental schools giving courses in those years. The figures taken from Polk's Dental Register refer to the number of dental schools conferring degrees in particular years, although a few exceptions are allowed. No single source giving information covering all these individual years was available.

[1]Admission to high school
[2]Completion of 1 year high school
[3]Completion of 2 years high school
[4]Completion of 3 years high school
[5]Graduation from high school, or its equivalent
[6]Graduation from 4 year high school (15 college entrance units)
[7]One year college
[8]Two years college
From master's thesis of Dorothy Fahs Beck, on file at the University of Chicago Library.

that he presented as good a course in anatomy as he could, but that it was not his business whether the student learned it or not. At the end of the course he would give a fine and thorough examination, but there were a large number of students in the class, and reading anatomy examination papers is hard work. He would take the class roll which had been given to him at the beginning of the year and beginning with A gave the first man 95, the second 94, the third 93 and so on, 92, 91, 90, 91, 92, 93, 94, 95, continuing to the completion of the roll. This was handed in as the official record of the attainment of the class. One year he gave a grade between 90 and 95 to a man who had been dead and buried for three or four months. One other instance, I mention, because it illustrates a phase of this problem: In many schools the fundamental medical subjects were taught to the dental student by the medical faculty, often in the same classes with the medical students. At one time I was spending a few weeks at a neighboring university trying to learn new methods that had been developed in the study of cer-

GRAPH OF TABLE 1

Number of dental schools in actual operation in Continental United States each year since 1840

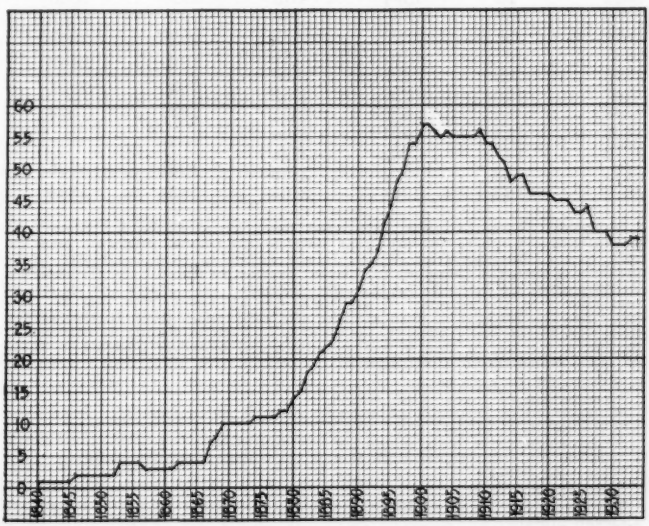


TABLE II
NUMBER OF GRADUATES FROM DENTAL SCHOOLS IN CONTINENTAL UNITED STATES EACH YEAR SINCE 1841*

Year	Number of Graduates	Year	Number of Graduates	Year	Number of Graduates
1841	2	1873	150	1905	2621
1842	3	1874	138	1906	1519
1843	6	1875	137	1907	1724[4]
1844	6	1876	168	1908	2005
1845	5	1877	197	1909	1761
1846	15	1878	210	1910	1646[5]
1847	15	1879	243	1911	1742
1848	22	1880	315	1912	1940
1849	24	1881	395	1913	2022
1850	17	1882	367	1914	2254
1851	22	1883	394	1915	2388
1852	26	1884	417	1916	2835
1853	42	1885	481	1917	3010[6]
1854	47	1886	473	1918	3345
1855	54	1887	584	1919	3587
1856	28	1888	739	1920	906
1857	38	1889	813	1921	1795
1858	39	1890	960	1922	1765
1859	57	1891	1220	1923	3271
1860	64	1892	1457	1924	3422[7]
1861	70	1893	436	1925	2590
1862	29	1894	873	1926	2610
1863	32	1895	1254	1927	2642
1864	38	1896	1432	1928	2563[8]
1865	61	1897	1744[1]	1929	2442
1866	69	1898	1894	1930	1561
1867	120	1899	2052[2]	1931	1842
1868	89	1900	2091		
1869	118	1901	2304		
1870	147	1902	2294[3]	1933	1986
1871	142	1903	2198	1934	1864
1872	141	1904	2168		

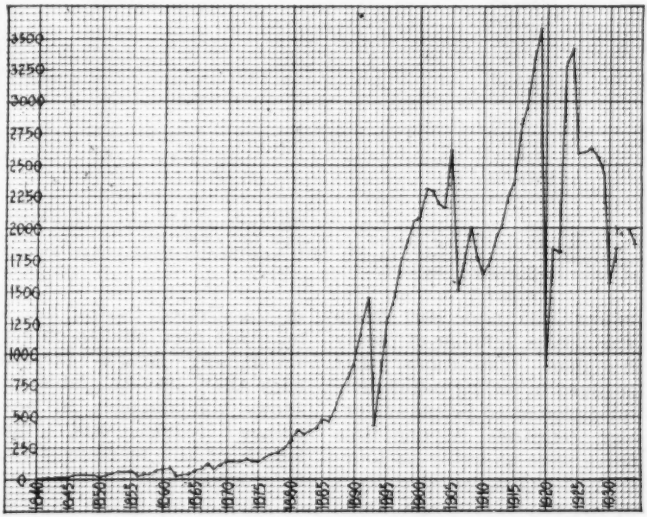
*Sources: Years 1841-1908: calculated from Koch, C. R. E.: History of Dental Surgery, pages 402-403. Year 1909: Polk's Dental Register; page 34, 1925. Years 1910-1930: Gies, W. J.: Is the Influx of New Graduates Commensurate with the Demands for Dental Service, or Should the Educational Requirements Be Altered? J.A.D.A., 18:593 (April) 1931. Polk's Dental Register: 1925 cites the number of graduates for all years from 1841 to 1924, but since the number of graduates for the early years given in this source disagreed so markedly with the comments in various standard histories of dentistry, the use of this source was discarded wherever possible in favor of more conservative authorities.

[1]Admission to high school
[2]Completion of 1 year high school
[3]Completion of 2 years high school
[4]Completion of 3 years high school
[5]Graduation from high school, or its equivalent
[6]Graduation from 4 year high school (15 college entrance units)
[7]One year college
[8]Two years college

From master's thesis of Dorothy Fahs Beck, on file at the University of Chicago Library.

GRAPH OF TABLE 2

Number of graduates from dental schools in Continental United States each year since 1841



tain fields in histology. One day, while I was working over a microscope in the laboratory with the head of the department, an assistant came in with an examination paper in his hand; he asked the professor in charge what he should do with it. Without lifting his head from the eyepiece of the microscope the professor said, "Is this a medical or a dental student?" The assistant replied, "A dental student"; the professor, "Oh hell! pass him."

Table I, with the accompanying graph, shows the number of dental schools in actual operation in the United States for each year since 1840 when the first school was founded.

It is interesting to note that the maximum number was reached in 1900 and 1901, and has been steadily decreasing since that time. The maximum enrollment, however, was reached in 1922-1923, the last year that students could enter the college of dentistry on graduation from a four-year high school. The table of dental schools, it must be remembered, is made up only of schools in actual operation and giving instruction. Be-

TABLE III
ENROLLMENT IN DENTAL COLLEGES

Year	Total
1934-35	7,217
1933-34	7,160
1932-33	7,508
1931-32	8,031
1930-31	8,129
1929-30	7,813
1928-29	8,200
1926-27	10,333
1924-25	11,863
1922-23	13,099
1920-21	11,745

Sources: Gies, W. J.: Is the Influx of New Graduates Commensurate With the Demands for Dental Service, or Should the Educational Requirements be Altered? J.A.D.A., 18:593 (April) 1931; and Dental Educational Council of America Statistical Reports.

tween 1885 and 1900 there was a large number of purely fradulent institutions that engaged in selling bogus dental diplomas to people in foreign countries. At one time there were as many as fourteen so-called dental colleges in the city of Chicago. Table II shows the number of students that graduated from dental schools in the United States each year since 1841. It will be noted that the general economic condition of the country and the change in entrance requirements appear to be the chief factors affecting enrollment and graduation. The year before an advance entrance requirement becomes effective, there is a sharp increase in enrollment; the year after, a still sharper decline, but in from three to four years the enrollment returns to normal. Table III shows the total enrollment of dental students in the United States, but I have not been able to obtain satisfactory figures farther back than 1920-21. Table IV shows the changes in entrance requirements, the length of the teaching term in months, and the number of years in the dental school.

"OR IT'S EQUIVALENT"

In considering the statements of entrance requirement, however, it is important to remember that there was often the acceptance of "the equivalent"; for instance, when the entrance requirement was graduation from a three-year high school, or its equivalent, I knew a young man who was anxious to get into a college of dentistry. He had never been to a high school; he was sent to a county educational officer, who after talking to the young man for some time, figured out a certificate of

TABLE IV
SUMMARY OF DATA ON THE EVOLUTION OF SOME GENERAL MINIMUM REQUIREMENTS AS ENFORCED IN A MAJORITY OF THE DENTAL SCHOOLS

Calendar period	Academic requirement for admission	Length of the Academic year			Length of the dental curriculum	
		Calendar period	Time Months	Weeks	Calendar period	Academic years
1840-85	None	1840-85	3-5		1840-85	2[1]
1885-97	"Rudiments of an English education"	1885-96	5		1885-91	2[2]
1897-99	Equivalent to that for admission to a high school[3]	1896-99	6			
1899-02	Completion of one year of high school[3]	1899-04	7			
1902-07	Completion of two years of high school study[3]	1904-09		30[4]	1903-04 1904-17	4 3
1907-10	Completion of three years of high school study[3]	1909-		32[4]		
1910-17	Graduation from a high school[3]					
1917-24	Graduation from a four-year high school (15 college entrance units)[3]				1917-	4
1924-	One year of approved work in an accredited academic college; based on graduation from a four-year high school[5]					
(1934-	Recommendation by American Association of Dental Schools that all dental colleges require two years of college entrance credits and a four year dental course.)					

[1]Five years of dental practice, before admission, was accepted from 1840-1885 as equivalent to one academic year of work in a dental school. The courses of lectures were repeated annually during this period.

[2]Dental practice before admission was no longer acceptable as an equivalent of any part of the dental curriculum. The two-year curriculum was graded and extended thereafter through two "separate" years, without repetition of lecture courses.

[3]"Or its equivalent," which was often interpreted to mean very much less.

[4]Teaching weeks of six days each, exclusive of holidays.

[5]In 1922 this standard was announced by the Dental Educational Council as a minimum requirement for its Class A rating, beginning in 1926-27; in 1924, as a minimum for its Class B rating, beginning in 1926-27. The standard has been in force in a majority of the schools since 1924-25; in 28 of a total of 44, in 1925-26.

From Bulletin Number Nineteen, The Carnegie Foundation For The Advancement Of Teaching, page 55, 1926.

PAGES 30-31, CHART, BEST

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TABLE V

COMPARISON OF CURRICULA* 1911-12—1935-36

(clock hours used)

College	Enrollment 1911-12	Enrollment 1935-36	Dental Technique 1911-12	Dental Technique 1935-36	Fundamental Science 1911-12	Fundamental Science 1935-36	Clinic 1911-12	Clinic 1935-36	Medicine and Diagnosis 1911-12	Medicine and Diagnosis 1935-36
Marquette	116	171	896	918	992	1190	1568	1292	8	56
Meharry	108	25	624	1696	1745	1864	1504	1504	48	80
Northwestern	376	341	1472	1298	1739	1111	1280	1526	——	121
Tennessee	34	84	1167	1701	722	1210	1580	1913	144	187
Western Reserve	1910-11 79	120	1915-16 1410	1934-35 1396	1915-16 835	1934-35 1196	1915-16 1680	1934-35 1328	——	1934-35 96
Creighton	65	95	448	1016	638	1088	1112	1928	48	176
New York	395		no data	818	no data	1233	no data	1914	no data	53
California San Francisco	88	142	1316	1584	1280	816	1408	1840	——	144
Washington	67	131	960	1024	1200	1344	810	1696	——	224
Temple	141	505	no data	898	no data		no data	720	no data	36
Michigan	232	155	1074	644	880	1481	1312	1712	——	144
Ohio	125	207	780	1110	460	1380	1400	2130	no data	72

Temple	141	505	no data	898	no data		no data	720	no data	36		
Michigan	232	155	1074	644	880	1481	1312	1712		144		
Ohio	125	207	780	1110	460	1380	1400	2130	no data	72		
Tufts	268	257	768	850	1024	1072	1312	1592	128	126		
Howard	104	37	no data	963	no data	137	1152	1760	no data	66		
Illinois	1914-15 88	146	1914-15 1562	912	1914-15 1248	1344	1914-15 1024	1630	1914-15	152		

*This list does not include all dental colleges.

equivalence for him in which he was given units of credit in household economics, because he had been in the habit of wiping dishes and sweeping the floors for his own mother; a number of units in music because he played the mandolin for his own amusement; similarly, units in handicraft, manual training, and physical culture.

In Table V, I have attempted to prepare a comparison between 1910 and 1935 in fourteen dental schools. The first column is enrollment; the second, the hours devoted to dental technique; the third, the hours in fundamental science; the fourth, the hours in clinic; and the fifth, the hours devoted to medicine or medical diagnosis. This table is unsatisfactory for several reasons; first, in many instances it was impossible to get information for 1910-11; even when circulars and announcements are available it often is difficult to decide how courses should be classified. These figures must, therefore, be considered as estimates more or less arbitrarily made and not as authoritative.

In regard to the time devoted to different subjects the figures are not convincing. In some instances the number of hours in dental technique has been markedly reduced. This has been made possible by the better intellectual preparation of the students and by the improvement in

methods of presentation from the point of view of teaching efficiency. The number of hours in fundamental science has in general increased, and it is certainly true that the quality of the work is greatly improved. The number of clinic hours shows the least change; in some cases a reduction, but in most instances, a slight increase. In 1910 virtually no school had in its curriculum anything which I believe could properly be called medicine or medical diagnosis.

CLOCK HOURS CUT

In discussing dental education since 1910 I will limit myself to the school with which I am most familiar, but it is certainly true that similar changes have been going on in all other dental schools in the country. In so far as possible I will consider these in their chronological order. In the teaching of dental technique the clock hours have been reduced to less than one third the time consumed in these departments in 1910, and the technical skill of the student at the end of the second year is superior to that of the student at the same point of his course in the earlier period. This has been made possible by the better mental training of the student who enters as a freshman and by the study of pedagogic methods. In operative dentistry the long hours consumed in performing dental operations at the bench have been greatly reduced, and most of this work is done on the "denteck" fastened to the headrest of the dental chair. Thus operative skill is acquired and at the same time instrumentation, manner of approach, position during operation, and many other things can be taught. Because of these changes the student comes to the infirmary and to operation on patients much better prepared and more skilfull than he was in the old days. In prosthetic technique the introduction of the patient into the technical laboratory in the freshman year has probably done more to motivate and rationalize the acquirement of technical skill than any other one thing. The reduction in the number of technique hours and the carrying of organic and inorganic chemistry into the preprofessional years has liberated valuable time which has made possible the introduction of new material into the curriculum.

One of the greatest changes in this period has been in the quality of teaching fundamental medical sciences, and in the attitude of the students to these sciences. As long as medical students were required to have two years of collegiate training for admission and dental students only

one, it was impossible to have them do work of the same quality. Dental students could not organize their work as well or cover as much ground as their better trained colleagues. A definite inferiority complex was introduced and a double standard necessitated. Since the two year entrance requirement in dentistry went into effect this discrepancy has disappeared. and dental students can and do accomplish as good work in the fundamental sciences as medical students. For instance, in anatomy last year the average grade of the dental student was higher than the average grade of the medical student, and I believe that it is generally accepted that the dental student's knowledge of the anatomy of the head and neck is superior to that of the medical student. Developments in local anesthesia, surgery, and orthodontia have been important factors in creating interest in anatomy. Courses in general medicine and in pediatrics have been added to the curriculum. These have done much to put the dental and the medical student on an equal footing, and to enable dental students to discuss with medical instructors problems in which general conditions and nutrition are involved.

The next step in development was the integration of the first and second years with the third and fourth clinical years. In the old days the general attitude was that when students had completed the second year they could begin to study dentistry, and there was little or no application of the knowledge previously acquired in the treatment of patients in the dental infirmary. Although the introduction of a general physical examination of patients in the admitting department is doing much to change this condition, probably the most important factor is the development of clinical laboratories in close association with the infirmary. The working of this system cannot be described in detail, but one example will suffice. When I was a student the question whether a root canal was ready for filling or not, after the treatment of a putrescent pulp, was decided by the odor of the dressing removed. Crudely stated: "If the cotton no longer stank the canal was ready for filling." For several years past no pulp canal has been filled in the infirmary of the College of Dentistry of the University of Illinois until, after incubation of dressing for at least twenty-four hours on suitable media, no bacterial growth resulted. This is carried on in the clinical labor-

atory by the students under competent supervision. By such methods the fundamental sciences have become vital things which must be used every day in the performances of the clinic.

REVISE METHODS

Undoubtedly, the most important and far reaching change that has occurred in the last twenty-five years is in the teaching of clinical dentistry. The same quality in technical skill is and must always be required, but an emphasis is being placed upon what should be done to make a patient dentally fit; upon the relation of his oral to his general health: eyes are being lifted from the teeth to the patient. In every dental curriculum diagnosis is playing a new and larger rôle. My father described the clinical teaching of dentistry in the Ohio College of Dental Surgery about 1867 by saying that, "The students listened to lectures in the morning and in the afternoon were allowed to practice on patients and attempt to put into operation what they had been told." For a long time recommendation for graduation was dependent upon the completion of a certain number of dental operations. The knowledge, judgment, and skill shown by the student in the management of dental patients is being substituted for the numerical standard.

About five years ago the faculty of the College of Dentistry at the University of Illinois undertook the entire reorganization of teaching clinical dentistry in the third and fourth years. The program was based on the following considerations: In the first and second years the student has fundamental sciences and the fundamental technical procedures in dentistry outside of the mouth; in the beginning of the third year, he is introduced to the clinic and must learn to perform these operations on living tissues and for patients. In the first clinical year the emphasis is upon skill and the technical performances of dental operations. The class is divided into four groups corresponding to the four clinical departments, and each group works continuously in one department for a certain number of weeks. The department furnishes the patients, makes all appointments, and assumes the responsibility for diagnosis and the determination of the character of treatment. For the clinical hours the students are kept busy as they would be in a science laboratory under close instructional supervision. As a result of this program the students at the end of the third year are as technically proficient performers in dental operation as previous stu-

dents were at the end of the fourth year. In the fourth year the student is made responsible for the examination, diagnosis, and treatment plan for the patient. The emphasis is on what should be done for this patient to make him dentally and physically fit, considering all of the factors presented. How should the execution of the work be organized and executed in the most efficient manner? There need be less detailed supervision of technical execution, and finally the student's recommendation for graduation is based upon the knowledge, judgment, and skill that he has displayed in the management of cases. Already the program is showing results, and I believe that it is an important step in the development of the last twenty-five years. To change radically, long established programs is a difficult problem. The reorganization of clinical teaching has thrown a greatly increased burden upon the entire teaching staff, and I can only praise the energy, enthusiasm, and loyalty with which they have attacked the problem.

Many years ago I heard Doctor G. V. Black describe his experience in the practice of dentistry. He said that when he opened his office in Jacksonville an old practitioner in the city told him that, if his filling operations would pay his office rent and overhead, his dentures would give him a nice professional income. He said: "I lived to practice dentistry in Jacksonville and see this condition reversed: if my dentures paid my office rent and overhead my filling operations gave me a nice professional income." For many years the dental profession has been chiefly occupied in maintaining the perfection and the efficiency of the denture by reparative processes, a health service of great importance. Caries has been combated by removing the disintegrated portion of the tooth attacked, and replacing it with indestructible material in such a way that the tooth is less liable to attack in the future than it was originally. We are only beginning to study the problem of arresting the disease in its inception and preventing the destruction of tooth tissues. For a long, long time the dental profession will undoubtedly be chiefly occupied with restorative programs, but I believe that the time may come when a practitioner of dentistry may say, that if his restorative operations pay his office rent and overhead, his preventive treatment will give him a nice professional income. Such a time will never come, however, unless dental education is conducted on a plane fully as high as that of education in medicine.

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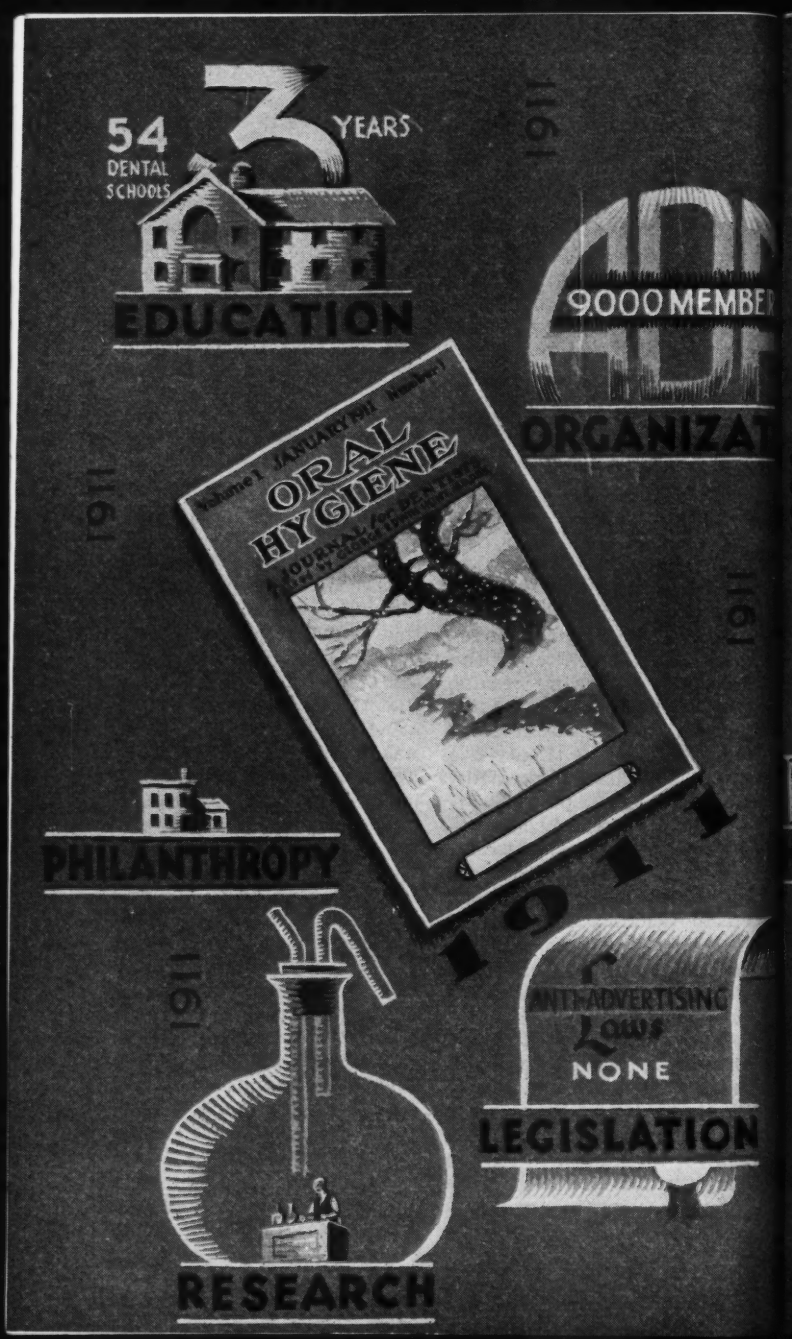
Chicago, Illinois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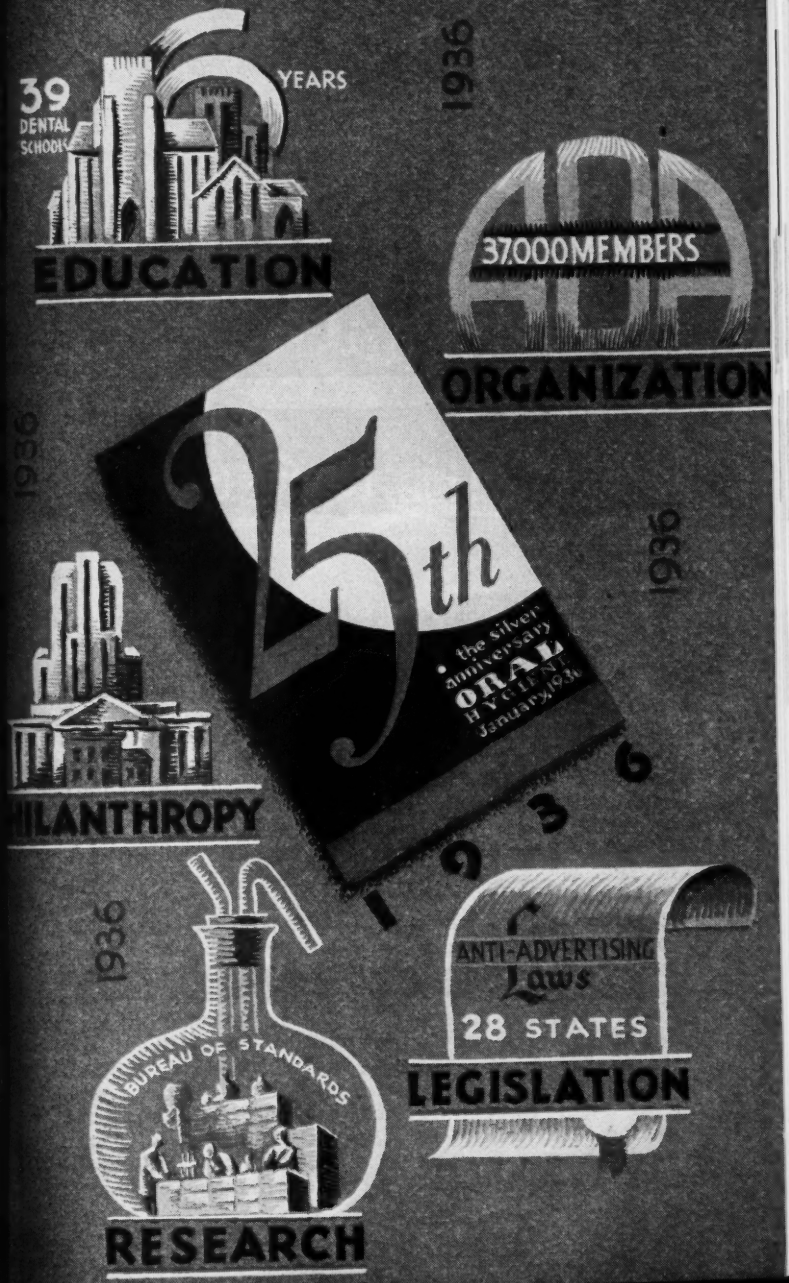
39 DENTAL SCHOOLS
YEARS
EDUCATION
1936
37,000 MEMBERS
ORGANIZATION
25th
the silver anniversary
ORAL HYGIENE
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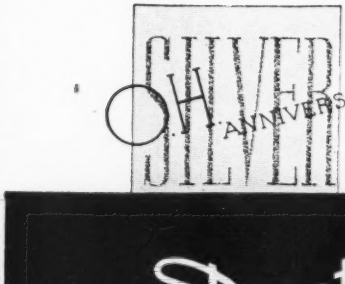
28 STATES
LEGISLATION



Dental Practice 1911-1936

by Walter H. Jacobs, D.D.S.

■ 1911—Start of the second decade of the greatest Century of them all! With America, the Land of the Free, the Home of the Brave, and the recognized leader in dentistry stepping along that new road to Prosperity (where have we heard that word before?) at a clip that astonished the rest of the world. Big Bill Taft was in the White House. The trusts, having gobbled up and cornered all the resources they possibly could, were being persecuted by the "common peepul" and the Supreme Court. The automobile was definitely here to stay, even the blacksmiths were admitting that, but you could still cross Main Street without waiting for signal lights, whistles, and permission from the local police commissioner. It was about the time when the cry of "Get a horse" no longer assailed the intrepid, "begoggled" motorist; and the horseless carriage was a means of locomotion instead of a short cut to the insurance "pay off"! Glen Curtiss made an aeroplane that could land on water; he called it a "hydroplane," but shucks, it never could have any possible use even if it did work. Oh yes, a fellow by the name of C. P. Rogers left New York on September seventeenth in one of those new fandangled aeroplanes and made the first transcontinental flight, landing in Pasadena, California, on November fourth; actual flying time 84 hours, 2 minutes! The "Georgia Peach," Ty Cobb, was leading the American League batting with

an average of .385. (Who could ever expect to hit more "homers" than Ty Cobb?) The rest of the world was not any too peaceful. The Italians and the Turks were engaged in a war, WAR of all the horrible things! In that advanced period of civilization!

Industry was humming, railroads were running, skyscrapers were beginning to push their long slender fingers up through the clouds. And, in there among the professions, coming on with leaps and bounds, gradually breaking off the shackles of empiricism and ignorance was *Dentistry*. Out from behind the bales of cotton that the "pushers" used for the treatments, dressings, and root canal fillings; and from behind the gruesome array of forceps that the "yankers" still looked upon as the only fit instruments worthy of treating the "problem tooth" —d e n t i s t r y continued its m a r c h to enlightenment, service, and dignity.

THE DENTAL PARLOR

Well, now let us get on to a dental—wait a minute we were going to say "office," but no, office is really too modern a word, it smacks too much of the big business, super-sales promotion era that was to follow a few years later—no, we shall not use "office," instead let us have that nice, homy, rich but not gaudy, word, the "parlor," the "dental parlor." It is very easy to find. If such bashful signs as "Dr. I. Philum and Co., Dentists"; or "Klondike Dental

"... the cry of 'Get a horse' no longer assailed the intrepid, 'begoggled' motorist."

" . . . those rubber plants . . . they, too, must have helped name the room the 'Parlor'."

Co."; or "Dentistry for All, Pain for None!"; or "Nothing Can Be Lower Than Our Prices, Unless It Is Our Work," and so on and on, half the height of the building, do not attract the attention as one walks along the street—just follow your nose! Only a few of the "parlors" at that time carried signs that made the Statue of Liberty look like a dwarf, but all carried that mellow, or rather "smellow" scent of iodoform, creosote, and stale, wet cotton! Blindfold the wanderer and set him loose—he might mistake the drug store, or the butcher's; the bakery, or the farm yard; but the dental parlor never. Once smelled; never forgotten! While others at socials, clam-bakes and "soirees" might have to wait to be asked their vocation, the dentist's was an open secret. Just let him stand 2 points starboard in an off shore breeze and it was 8 to 5 the first sentence addressed to him was something like, "Say Doc, why do all dentists look sad? Because they are always down

in the mouth. Ha, Ha, Ha!" Naturally, this always broke the ice and may have led to a new patient or a poke in the nose—usually it was the latter!

But now back to the dental parlor, on some sunny street, just one flight up the rickety, dark staircase. First into the waiting room—and at that time a waiting room was where you waited! No real appointments were made; just "come again about the same time tomorrow." Just come and wait, and why not? Wasn't there always a nice pile of *St. Nicholas* magazines going back to 1906, a swell opportunity to catch up on some back serial stories. And that program of the Hudson-Fulton Celebration; that could be read, what was left of it, over and over again. The bowl of gold fish on the center table was always good for at least ten minutes concentration; and that big picture of THE STAG AT BAY over the fireplace, that was a work of art to gaze upon and admire time and time again. No fear of being lonesome, usually a few others "waited" also, and even if there were one or two swollen jaws or a few crying children present, the entire atmosphere was pleasant and comfortable.

FOLDING DOORS

And now into the parlor itself, where "Doc" worked, separated from the waiting room by those folding doors. Those folding doors! No death sentence; no peal of thunder; no hiss of the cobra ever held the terror of their clattering, jumpy movement! Each time they clanged it was notice that the "next" could come in. And how exciting it was for the morbidly curious when perchance Doc forgot to close the doors all the way and the "waiters" could snoop on the dental miseries of a fellow man!

It might be hard, up to this time, to understand just why the word "parlor" was used to describe the Doc's place, but one squint at that red rug, under the chair and then spreading out all about the room, might have had a lot to do with it! Slightly frayed at the edges, well worn where Doc stood, and usually spotted and damp underneath the cuspidor, particularly where the snake-like drain hoses coiled maliciously and trailed to the pipes in the wall—it truly lent glamour to the room. And then again those rubber plants scattered about the corners, those heavy looking, insipid masses of foliage—they too must have helped name the room the "parlor."

Anyway, the most colorful, intricate, and beautiful piece of furniture in the room was the medicine and instrument cabinet. Not so much when it was the dull, short, mahogany kind—but the big white one with all the windows, drawers

and hinges. And that awe-inspiring word "sterilizer" printed in red letters boldly on the center panel—didn't that make for mystery? But, of course, please don't ask what it meant! Now, if the furnishings already described attracted the eye, the eye soon looked for and always found that terrible black ball perilously perched near the ceiling, with that long slender cable hanging down from it, as dangerous as a high tension wire—the "driller"! That was something to be avoided!

Coming off a hinge on the wall in front of the chair was the bracket table. It was a harmless looking affair, holding only six little medicine bottles, a jar of cotton, two chip blowers, an alcohol lamp, a box of temporary stopping, and a few gobs of set plaster from that last impression.

A most refreshing view from the chair, usually to the left and downward, overlooked the spittoon; around and around twirled the water in the fancy designed glass bowl. At times the bowl was colored a bloody red, possibly to allay the fear of bleeding to death. Behind the chair and next to the folding doors was the Doc's roll top desk; massive and bulging with advertisements, bills, accounts due, and perhaps a dental magazine.

But remember, dentistry was not in the doldrums at this time. As we said before, things were beginning to step along at quite a pace. Back in 1906, Taggart cast the gold inlay, and amalgam was doomed. In 1910 Doctor William Hunter demonstrated oral sepsis, and it looked as if American dentistry was doomed. (Time out to report that both are doing very well thank you; that is, amalgam and American dentistry). And so here we are up to 1911. The root canal was quite a problem. And do not think there was no "food" problem at that time; not so much the problem of getting it as much as what kind to get and what to do with it when you have got it. Fletcher wanted it chewed till all was soup. Many an abraded tooth being built up these days stands as a living memory to that dietary fad of "chewing to the last drop." It is a good thing it passed or the poor old Eskimo woman, always mentioned when it comes to abraded teeth because she chewed her husband's boots, might have had the laugh on us—at least she didn't drink her meat! Others, not as yet mentioning calories or vitamins, were speaking of "pure and fresh foods, vegetables, and natural fruits." They called upon the tribes of India, Burma, and Siam to prove their points, as we today refer to the Australian aboriginals, the natives of Outer Hebrides, and the Swiss yodelers; in other words, it is the same old racket—get a

food idea and then find a tribe that uses it. The only trouble has been that nobody as yet can get the American public to use it!

FIRST MOVIES

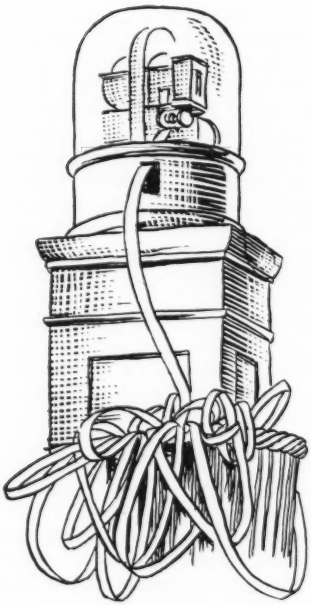
The movies first broke into dentistry back in 1911 as George Hunt made the first 4 star super-production called "Oral Hygiene." At the same time the Forsyth bequest for a dental infirmary in Boston became known, and the profession first heard rumors of "clinics interfering with private practice." (See, there is nothing new about it at all!) Emetine came in and it looked bad for pyorrhea; today, it still looks bad for emetine! In 1917 came the Eastman Dental Dispensary in Rochester and more agitation against the clinics. (The boys were starting to warm up). In the same year came the dental hygienist—a new boon to dentistry—Whee, no more prophylaxis! Slow to catch on at first and looked upon with suspicion by the dentist, and particularly by the dentist's wife, the young lady made good. Came the WAR in '17 and '18 and dentistry got a big boost, as thousands who never saw a toothbrush outside of a drug store display counter now had to use them or be court-martialed! Patients began to show up in greater quantities—and the more patients, the more bad teeth, old broken dentures,

"... he has now become a radiodontist."

swollen gums, and infected roots. And (here is one for Ripley) all these patients had real money and were willing to pay real cash for dental services.

ENTER THE X-RAY

In '19 and '20 the x-ray really takes its place in dental practice and, despite innuendos concerning lost fatherhood, the dentists accept it! The equipment man moves one in, shows the dentist how to take a film, leaves a booklet on "How to be an X-Ray Specialist in 4 Easy Lessons," and the dentist finds that, despite the fact that he is already a prosthodontist and an exodontist, he has now become a radiodontist! The tube begins to glow; the machine



"Margin takes on a non-dental meaning."

sparks and growls, and the patients quiver. Teeth are foreshortened, elongated, blurred, over and under developed, roentgenogramed, radiographed, and just plain x-rayed; and the root canal is still a problem. Vincent's infection becomes trench mouth; or vice-versa, and the fusiform bacillus and the Vincent spirochete get press notices galore! The medicine cabinet starts to be cluttered up with a few new drugs, and chromic acid takes its place as a stain of first importance on the dentist's fingers. Preventive dentistry gains real momentum and some of the lads fear that soon teeth will no longer decay, loosen, or ache. Taking advantage of army service and experience, a few boys branch out as oral surgeons and liability insurance becomes very popular. The orthodontists earnestly start to go to work and children's teeth are straightened, while their parents bank rolls are bent.

PUTTING ON FRONT

The "How to double your income" weasels begin spreading discontent. These dental economy experts, usually not dentists themselves, admit that things have been pretty good so far—but why be satisfied? Why keep on working day after day; making a good living; paying the rent; and eating three times a day; when the real gold mine has yet to be tapped? "Put on a front; get expensive; look important—*Big Business!*" And so the general flight to *"Big Time"* dentistry officially begins! The office gets a thorough overhauling; out goes the old cabinet, overhead engine, roll top desk, spittoon and rug, and in comes paraphernalia that must have given Rube Goldberg some swell ideas. It looks like a cross between a lamp-post, a battleship control room, and a torture chamber. It's built

to burn, blow, bomb, and buzz and has on it air, water, gas, electricity and more buttons than a drum major's overcoat! It also has on it plenty of equipment company notes! But the patients like it; fees go up; patient's resistance goes down; and all old bridges, plates, and fillings go out—of the patient's mouth! The stuff coming off the teeth, those big, yellow bug collectors, heavy with gold, tartar and food debris of the past 15 years, are nonchalantly thrown on the side, and woe betide the poor patient who might innocently ask for them. Sort of a "finders keepers—losers weepers" system! Thus the "How to double your income" wizards gain the first round by a big drive and a short putt! The inlay gets a real good grip on the tooth. Up to this time the cavities held more cement than gold, but now the proportions favoring the precious metal start rising.

WORK ON MARGINS

1924, '25, '26 — Dentistry makes a new discovery—*WALL STREET!*—And gold starts on its way from the teeth to stocks and bonds. Besides the dental magazines and *National Geographic* and the sporting page of the local newspaper, the dentists begin to read the "financial sheets." Margin takes on a non-dental meaning with less attention being paid to the one on the cavity preparation! The Mellanbys start feeding the dogs and the dentists start feeding the customer's man!

The vitamins become popular: starting off with a simple A, B, C, D, and the foods they are contained in, the diet devotees soon bring out B_1, B_2, E, and G. The patients have to drink orange juice straight, with gin, or with castor oil. But there must be plenty of orange juice! They also have to eat tomatoes, prunes, and nuts; their reaction being almost wholly typified by the last. (Note—the root canal is still a problem).

1927, '28, '29—Stocks are climbing; more patients; more teeth; and more money keeps coming in. More margins on paper and less on the teeth. The "How to double your income" apostles go after the profession like the bath on Saturday night! In the office more alterations have to be made. The offices start to look like medical centers, and the reception rooms make the grand ballroom at the Waldorf look like a hall bedroom up the alley. The good old office becomes a "suite" and has more corners, alcoves, and trick partitions than a jig saw puzzle! A buzzer system is installed to prevent the doctor from getting lost. The hygienist has her own "operating room," and the assistant is promoted to "office manager." She lords it over the receptionist, who

makes the appointments, welcomes the patients, and so on, and she in turn has final word over the second assistant who runs errands and does the menial labors. These ladies of the "ensemble" become the "staff." Some of the staff are sent to dental efficiency colleges to become even super-efficient and shortly there are more systems of running the office than there are of "picking the horses"! The dentist himself has to read books on Practice Management, Child Psychology, and Bank Arithmetic. He soon has to punch a time clock, check in, and check out; he "checks out" especially on pay day. But it's all in fun and everybody is happy; so why worry? Doesn't the new system make the patients pay? They pay if they are early; if they are late; if they do show up; and if they do not; if they want anesthesia, and even if they don't want anesthesia to have a tooth out, there is a charge for the extraction. What a system! What a system!

THE BROKER IN CHARGE

Many dentists are only in their "suites" part time. The broker's office has them most of the day. In fact they are making more money not practicing dentistry than they could by working at the chair. And it is so much nicer to see the little strip of white paper dancing its way out of the ticker than to see if all the decay has been removed, or if the dentures are in balance. "Steel" was cheap at 212, so buy more and work on patients less! "The more you bet, the more you get," and the boys began to ask themselves how long this had been going on before they got wise to it. Some men became real estate operators and just whispered that they happened to be dentists on the side, but of course that must not stop the big deals.

The ultraviolet ray, actinotherapy, becomes important, and a sun lamp occupies a corner of the treatment room. The surgical treatment of peridontoclasia is fashionable; why treat the gums if you can cut them off? Elastic compounds are developed—just insert a nice tasting, sweet smelling, jelly-like ooze and out comes the impression in one piece—only it isn't too accurate! Of course, the root canals are still a problem.

TECHNICAL REACTIONS

In other words, everybody was all set to keep going in the Fall of '29. Bigger and better suites were planned and rented, and all was well with the world. Came October and November '29 and with them came telegrams, registered letters, telephone calls (not for appointments), headaches and technical reactions. Now up to this time all reactions had usually hurt the patients; the pulp reaction;

the tissue reaction; the bone reaction; and others; but here was a new one, and on the dentist himself—the technical reaction. And how it hurt —financially!

The suite looked and sounded like the stock exchange on a busy spree. Naturally being only a "slight economic readjustment" besides a "technical reaction" nobody thought it was going to last long.

This brings us to '30, '31, '32: Factories laid off help, a few firms went on the rocks, and a word long forgotten became better known—"depression." When patients and dentists got together it sounded like the Wailing Wall on a busy morning! Everybody tried to out cry the next one, and everybody began to brag how much money he had lost. The reaction set in quietly and sadly. Some moved to smaller offices, others let part of the "staff" go, all cut down the expenses wherever possible. Patients became scarce; they wanted only the absolutely necessary work done; and cheaper work when it was to be done. Patients started asking for everything coming off and out of the teeth; even old amalgam had to be returned! The old gold jar hidden away in the lab was as empty as a dry socket! What became of the "How to double your income" professors? They went broke too.

The dentists began to realize that even children have teeth so pedodontia got a big play. For the first time in a long while the man in the white gown smiled at little Hugo, instead of making a "boogie man" face when little Hugo walked into the office. Panel dentistry, State dentistry, socialized dentistry—all new terms with dark, hideous meanings cropped up in the literature and at meetings. Articles were being written on the subject of the new dental economics, speeches were being made. Men began to read their dental magazines again —there was lots of time!

1934, '35—The door bell and 'phone start to ring again; nothing like the "good old days"; but it is new work and the patients are made to feel more welcome and are treated with more consideration. Attempts are being made to really interest the patients in oral health and mouth hygiene instead of "movable removable, decidedly unreasonable" bridgework! The importance of the vitamin, calorie, and hormone, and so on, is still stressed but the public holds out for candy, cake, and coffee! (The root canal is still a problem). Pyorrhea is also still present. Clinics are with us. Fillings are falling out occasionally; some teeth still have to be extracted; and caries, like "Old Man River," keeps rolling along. In other

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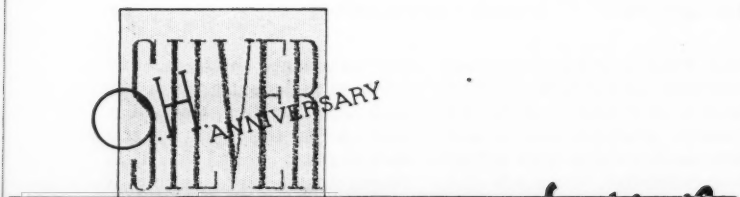

■ Convincing evidence that the status of the dental profession has been definitely raised during the past twenty-five years is found in even a brief survey of the important federal and state legislation enacted during the last quarter of a century.

The year 1911 marks the first attempt on the part of Congress to bring the rank of the members of the Army Dental Corps a little closer to that accorded officers of the Army Medical Corps. On March 3 of that year, ten years after the first Dental Corps consisting of thirty contract dental surgeons had been created by an Act of Congress, dentists were for the first time given the right to the commissioned rank of First Lieutenant under stipulated conditions. Still dissatisfied with this rating, far below that of members of the Army Medical Corps, the legislative committee of the National Dental Association continued its efforts to improve the status of the dentists in government service.

Increased rank up to and including Major was provided for the Dental Corps by the National Defense Act of June 3, 1916, but it was not until October 6, 1917, that Congress finally granted dental officers equal rank with the officers of the Medical Corps. This legislative achievement was greeted with much enthusiasm and considered particularly significant, because it not only raised the status of dentistry in the Government service but assured it of increased recognition by the allied professions and the public.

Legislation creating a Navy Dental Corps was enacted August 22, 1912, and through subsequent amendments the members of this Corps have

been given a status similar to that of the medical officers of the Navy. This legislation for the Army and Navy Dental Corps has also been the basis for establishing a favorable status for dentists employed in the United States Public Health Service and in the Veteran and Indian Bureaus.

PUBLIC HEALTH SERVICE

Before 1919 there were no dental officers in the United States Health Service, although this was the oldest governmental medical corps. In that year dental officers were admitted to the corps and given reserve commissions in the various grades. They served in this status until April 9, 1930, when Congress enacted legislation authorizing their transfer to the regular corps of the Public Health Service, according to the grades held at that time, with full credit for previous service. These officers are now commissioned with the same rank, pay, and promotion as provided for the Army and Navy. At present, there are forty-two commissioned officers and seventeen dental internes; the latter being appointed for periods of one year. If their services as internes are satisfactory, they are given the privilege of taking the examination for admittance to the Regular Corps.

Dental officers of the United States Public Health Service have been assigned to dental research duty at the National Institute of Health. Ten dentists have also been appointed research consultants in the United States Public Health Service.

In the Indian Bureau there are ten full-time dentists under Civil Service, and ten part-time, some of whom are rendering service on a fee basis. The dental service of this Bureau is connected with the Health Division of the Office of Indian Affairs and supervised by medical and dental officers of the United States Public Health Service.

On June 7, 1924, Congress enacted legislation providing dental service for the Veterans Bureau. There were at the last report 161 dental officers in this service. Furthermore, there are 3,079 dentists in private practice whose services are utilized, as occasion requires, in rendering treatment to administration beneficiaries.

OTHER FEDERAL LEGISLATION

Other federal legislative problems to which the dental profession has given its attention are:

1. Successfully opposed two attempts to provide an Excise Tax of $10.00 an ounce on new-mined gold at the 1920-21 sessions of Congress.

2. In the Tariff Acts of 1922 and 1930 successfully opposed unreasonable duties on dental instruments.

3. Reduction of tax on alcohol.

4. Reduction of narcotic license fee.

5. Promoted appropriation for Cooperative Research at Bureau of Standards.

6. Assisted in coordinating all Governmental Health Services in the United States Public Health Service.

7. Assisted in promoting National Institute of Health legislation.

8. Opposed excise tax on dental proprietary products.

9. Promoted legislation relating to International Dental Congress.

10. Opposed Boiler Inspection Legislation, including Dental Air Compressors and Vulcanizers.

11. Cooperated in modifying Bankruptcy Laws.

12. Opposed non-service connected pension legislation.

13. Cooperated in drafting and enacting uniform narcotic legislation for the various states.

CORRELATED PROBLEMS

Some important work has been done in recent years with reference to departmental regulations and other adjustments of federal problems:

1. Cooperated in securing a deduction of expenses in attending professional meetings, in income tax reports.

2. Cooperated with the Department of Commerce and Bureau of Standards in establishing cooperative dental research at the Bureau.

3. Participated in the White House Conference on Child Health and Protection.

4. Modification of prohibition regulations.

5. Excise Tax on Precious Metals, 1932 Revenue Act.

6. Reestablishing former status of Navy Dental Corps.

7. Assignment of Dental Officers to Citizens Conservation Corps.

8. Obtained recognition for American dental degrees in England.

9. Cooperated in formulating narcotic regulations.

10. Assisted in restoring "Dental Service" versus "Stomatological Service," in the Navy.

11. Aided in securing release of embargo on gold.

12. Worked for modification of regulations requiring affidavits in the purchase of gold.

13. Endeavored to protect the dental interest in recent executive orders relating to gold.

14. Secured reasonable and practical interpretation of application of NRA to dentistry.

15. Participated in the Dental Laboratory Code controversy, with a view to safeguarding the interest of the profession and the public.

These high lights in connection with the legislative and correlative activities which have been undertaken are evidence of the vigilance of the Legislative Committee of the American Dental Association, which during the last twenty years has expended funds of approximately $23,500 in this work. As chairman of the Legislative Committee Homer C. Brown, D.D.S., has devoted more thought, time, and energy to this legislation than any other member of the dental profession. To him must go much credit for these signal achievements in dental legislation.

STATE LEGISLATION

Although nearly every state has had a dental practice act for many years, it is only during the past three years that more stringent provisions against advertising dentists and racketeering methods have been added to any large number of these laws. The states now having anti-advertising laws[1] are: Alabama, California, Colorado, Delaware, Florida, Idaho, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Oregon, Rhode Island, Tennessee, Texas, Utah, and Wisconsin. The effectiveness of all these laws has been immeasurably strengthened by the opinion delivered April 1, 1935, in which Mr. Chief Justice Hughes upheld the constitutionality of the Oregon Law of 1933, providing for the revocation of licenses for advertising professional services. Progress in the work of modernizing the dental practice acts of the various states indicates a strong trend toward more effective legislation regulating the profession in prospect during the *next* twenty-five years.

[1]Map Showing States Having Anti-Advertising Laws, ORAL HYGIENE 25:1248 (September) 1935.

■ Dentistry as a science is passing through a new and more progressive period; one which marks the transition of our profession from its immature beginnings to a period of scientific growth. The pioneers who laid the splendid foundation for dentistry built wisely and brought the young profession through many vicissitudes. Largely on the basis of the excellence of the art and the skill of its artisans it has won an important place among modern social organizations.

In the early history of the profession the concept that diseases of the teeth and their supporting structures were preventable or curable played only a small part in either the preparation of the student for the practice of dentistry, or in the actual service of the practitioner. Indeed, it then seemed generally to be taken for granted by those practicing dentistry that these disorders were inevitable and that dentistry would always consist primarily of making repairs. A survey of the literature that filled the pages of the dental journals and the discussions in dental societies prior to the last quarter century indicates the general impression that dental caries and pyorrhea were not preventable.

It is of interest that the growth of the American Dental Association from about 9000 members to its present enrollment of more than 37,000 has occurred coincidentally with the development of the conscious need for and the organization of

dental research; both of which have occurred during the last twenty-five years. Significant, too, is the fact that one of the important influences, which in that reorganization period induced the members of the dental profession to become members of the American Dental Association, was the appeal made by those of us who organized the Research Commission urging all to join the Association for the privilege of contributing one dollar per year per member for the support of dental research. The fact that the members of the dental profession in response to direct appeals provided in cash and pledges over $70,000 for a special Research Fund (not including the building and equipment fund) during the years from 1912 to July 20, 1916, is evidence of the awakening of a deep interest in scientific problems directly and indirectly related to dental disease.

A resumé of all the scientific contributions which have been involved in the transition of our profession from a mechanical art to a biologic science would cover more space than is allowed for this brief review. Accordingly, only the outstanding steps involved in this progress will be discussed.

The organization of the Research Commission of the American Dental Association included the organization and

WESTON A. PRICE, D.D.S., M.S.

establishment of the Research Institute of the American Dental Association. The money obtained for the purchase of the Institute property was raised almost entirely outside the dental profession. With the first organization of the Research Commission grants were made to workers in productive fields in several universities with dental departments. This assisted greatly in building up a working staff and developing a research spirit in these institutions, which have been progressively enlarged. Several splendidly organized units are now actively engaged in investigations. With the increase in the appreciation of the need for and value of dental research more liberal funds have been made

available in the teaching institutions.

The research workers have been organized to form the International Association for Dental Research, which has taken over the control of the publishing of the *Journal of Dental Research*. The dental profession is deeply indebted to Doctor William J. Gies of Columbia for his untiring effort and unusual skill both in organizing research workers and in establishing the *Journal*.

The progressive efforts of the members of the International Association for Dental Research are indicated by a review of the annual programs; the last one of which contained over ninety research reports.

In 1913, the Research Commission of the American Dental Association was formally organized in Kansas City. Three of the members of the first Commission have been continuously active; namely, Brown, Volland, and Price. The policy adopted by the Commission provided for carrying forward investigations in the biologic sciences with a view to throwing light on the etiology of dental diseases and thereby providing means for their prevention or control; also for investigations dealing directly with the mechanical arts of dental practice. In 1916, the annual dues of the American Dental Association were increased two dollars, one of which was for dental research. The year ending June, 1929, the annual available fund from the special dues had increased so that $29,286 was expended by the Commission for dental research for that fiscal year. Since that time the appropriations have been reduced progressively to about $13,000 at present. Of late the funds have been largely expended on the mechanical arts of dentistry. The support of investigations on biologic problems has accordingly suffered nearly all of this reduction. Fortunately, the spirit of research has been so strong that excellent research programs have gone forward in search of means for the prevention of dental caries and the breakdown of the supporting tissues of the teeth.

An important factor in awakening the consciousness of responsibility on the part of the members of the dental profession was the development of the concept that much constitutional disease involving other organs and tissues of the body had its origin in infections in and about the teeth. Two and a half decades prior to this time, the theory and practice of dentistry assumed that infected pulpless teeth were relatively safe if treated according to one of the many procedures in current use.

One of the earliest contributions by the Research In-

stitute of the American Dental Association, which began its work in 1915, was the survey of the relative and actual values of many of the medicaments being prescribed and used for treating infected teeth. This report was published by Brooks and Price under the title The Relative Efficiency of Medicaments for the Sterilization of Tooth Structure.[1] One hundred and ten different drugs and combinations that had been advertised in the literature were analyzed, and only a few were found to have any considerable value in sterilizing infected tooth structure. This produced a sharp reaction, since it reflected on the current teachings, and was one of the important factors which contributed to the closing of the Institute in 1919.

STUDY FOCAL INFECTIONS

About this time the early investigations of Billings, Rosenow, and Mayo in America, and Hunter in England were making an important impression in the medical and dental professions because of the light their work threw on the relation of focal infections, particularly dental, to systemic disease as localized in other parts of the body. This placed the infected pulpless tooth in the limelight and challenged the safety of its conservation including the current practice of anchoring extensive restorations to these teeth as abutments. Many research workers contributed to this important problem, all throwing light on the rôle of focal infection in general, particularly assaying the rôle of focal infection in pulpless teeth, in systemic disease.

The uniformity of the results of three of the principal contributors at that time; namely, Rosenow, Haden, and Price, constituted an important influence in reshaping dental practice. Coincident with these studies important investigations were carried forward on the physical factors involved in the treating and filling of root canals.

Callahan contributed the sulphuric acid technique for opening up root canals; also the rosin solution for root fillings. Howe introduced the ammoniacal silver nitrate method. Rhein and others developed ionization. Rickert contributed the method using iodine compounds for root sterilization. All of the procedures for root filling implied the possibility of sterilization of an infected tooth. Price found the physical and chemical problems involved so difficult that he offered a prize of $500 to the person who would first present a method

[1]Brooks, M. M. and Price, W. A.: The Relative Efficiency of Medicaments for the Sterilization of Tooth Structure. J. National Dent. A. (March) 1918.

that would sterilize infected cementum in situ by treating through the canal. Incidentally, no one has as yet presented a technique acceptable for accomplishing this in the mouth.

While laboratory workers were making important contributions to the technical phases of the management of the infected tooth, a host of clinical observers throughout both the medical and dental professions were adding an enormous mass of data based on practical observations in clinical practice. These included reports of large numbers of cases in which acute involvements of other organs had been relieved by the removal of infected teeth, in many of which roentgenograms showed no evidence of pathology. Dental practice was, accordingly, proceeding rapidly and radically toward the elimination of infected pulpless teeth. Unfortunately, in many instances the pendulum swung too far and resulted in the removal of all the teeth for fear some tooth was infected. This trend was rapidly counteracted with the result that only straight-rooted single-rooted teeth in favorable individuals were recommended for conservation by even the most radical exponents of treatment and conservation of infected pulpless teeth.

DENTAL CARIES

The approach to the investigation of the etiology of dental caries has been chiefly along two distinct lines based on different concepts. The doctrine almost universally accepted by the dental profession until recently has interpreted dental caries as being primarily a bacterial problem resulting directly from the activity of acid producing organisms of the teeth. On this basis the main emphasis on all preventive problems has been upon the mechanical cleansing of the teeth. This has had its expression in the establishment of such organizations as the oral hygiene movement in its several forms, including the establishment of this journal. On this mechanical basis the teeth of school children have been examined, oral prophylaxis established, and campaigns carried forward among lay groups of adults and children. This concept has been expressed in terms equivalent to the phrase that a "clean tooth cannot decay." That this interpretation was not adequate was continually demonstrated by the fact that even excellent cleanliness of the mouth did not prevent dental caries or check it when active; nor did those persons with high immunity necessarily use oral prophylaxis regularly.

The bacterial concept of

dental caries was first promulgated by Miller and had many exponents both prior to and during the past quarter century. Among the very efficient groups of workers during the past two decades has been the Michigan group headed by Doctor R. W. Bunting.

Doctor J. Leon Williams is given the credit for coining the phrase "a clean tooth cannot decay." His work and that of Doctor G. V. Black had emphasized that dental caries was entirely a local problem.

Several factors indicated strongly the need for a different approach to the dental caries problem; among them the failure of prophylaxis, including the use of bactericides as washes, to prevent dental caries, as evidenced by the fact that many persons including virtually all of certain tribes who had not used oral prophylaxis and who had unsanitary mouths still did not have dental caries. This emphasized the need for investigation of other factors, particularly nutrition.

THE NUTRITION PROBLEM

Coincident with other developments during the quarter of a century in question, there was a great advance in the knowledge of certain food factors which were found to be protective and essential for body growth and repair. Successively several vitamins were isolated and identified with specific tissue functions. These offered new tools for approaching the problem of dental caries. There was also a marked advance in biological chemistry, which became available for a new approach to the dental caries problem.

The investigations directed toward determining the etiology of dental caries included animal feeding experiments in which various modifications of dietaries were studied. Notwithstanding the wide variation between animals and human beings definite advances were made. Among the early workers using this approach were McCollum, Howe, and Price in America and May Mellanby in England. Mrs. Mellanby noted a marked change in the structure of teeth of dogs due to modification of the nutrition, and placed much emphasis on increased susceptibility of the teeth to caries on the basis of their structural defects. Among the many contributions made by McCollum, the separation of vitamin D from vitamin A and the identification of their individual rôles in body building and function constituted an important advance to provide a new approach to all calcification problems. Through the use of monkeys and other animals, Howe established marked structural changes both in the teeth and in their supporting structures and

called attention to the influence of vitamin C. Hanke made extensive investigations of the effect of orange juice and emphasized the importance of vitamin C. Price demonstrated that dental caries could be both prevented and controlled when active by reinforcing the dietary of susceptible persons with foods high in minerals and the addition of cod liver oil and butter vitamins.

Accordingly, the two principal theories presented as a basis for the etiology of dental caries have been those involving the mechanical control of the external environment of the tooth as expressed physically and chemically and those relating to the biologic factors and associated with nutrition. The former implied that the preventive procedures would of necessity be primarily mechanical on the basis that a clean tooth would not decay. The second implied that the prevention was a matter of nutrition.

Since many persons known to have a high immunity to dental caries have made little or no effort at oral prophylaxis, and further since many persons who used extreme care and vigorous effort in oral prophylaxis had rampant tooth decay particularly at certain periods, it seemed important that special studies be conducted to ascertain the variables in the two groups. To accomplish this it seemed desirable to find and study large groups with each immunity and susceptibility where the variables could be restricted to the fewest possible factors. It has been known that the skulls of many primitive races of certain tribes had virtually complete immunity or nearly so to dental caries. The skulls of other primitive groups were known to have a high incidence of dental caries. While it is impossible to reestablish the conditions under which these earlier people lived, it has seemed important to find, if possible, remnants of such primitive racial stocks, who still have their high immunity to dental caries, in order that their present living conditions may be critically analyzed and that they may be used as a control to study the factors that are changed at the points where the high immunity to dental caries is lost.

Pickerill made an important contribution to the knowledge of the Maori tribe who were the inhabitants of New Zealand at the time of its discovery and occupancy by European immigrants. He interpreted the available data as indicating that their high immunity could be traced to racial factors expressed in tooth quality together with the influence of acid fruits on the flora of the mouth. It is important to note that Pickerill's work was largely done

prior to the discovery of the rôle of vitamins.

Jones and associates working in Hawaii have interpreted their data as indicating the controlling factors to be an excess of base over acid in a protective diet.

In order to learn directly from remnants of primitive racial stocks now living Price[2] has made field investigations among the natives in several parts of the world. These have included the following:

1. The Swiss in isolated valleys of Switzerland for comparison with those in contact with modern civilization in the plains and easily entered valleys. (1931-1932)

2. The people in the isolated districts of the Islands of the Outer Hebrides for comparison with those at the ports. (1932)

3. The isolated Eskimos of Alaska for comparison with those in contact with civilization. (1933)

4. The Indians of the far north in Canada for comparison with those at the costal and other points contingent to civilization. (1933)

5. The isolated groups of South Sea Islanders in comparison with those who have encountered modern civilization. (1934)

6. The skulls of pre-Columbian Indians in Florida for comparison with each isolated and modernized living Florida Indian. (1935)

7. Several primitive races in eastern and central Africa in comparison with those in contact with civilization. (1935)

These studies have included, in addition to the examination of the teeth, the recording of physical development of the face and dental arches together with an analysis of the foods used in the various groups. These field studies have revealed the change from nearly complete immunity to dental caries for the highly isolated groups (living on native foods in accordance with accumulated wisdom) to active caries often rampant for the individuals of those groups using the foods of modern civilization. This susceptibility reached 40 per cent of all teeth examined for some groups. An analysis of the foods revealed a radical change from a high mineral content diet, particularly phosphorus, together with a high fat-soluble activator content and relatively low in calories; to a high calory diet much lower in minerals, particularly phosphorus, and lower in fat-soluble activators. Price, accordingly, concludes that the protective factors are largely if not entirely to be found in the nutrition and that since many

[2]Price, W. A.: Why Dental Caries With Modern Civilizations? DENTAL DIGEST 39:94 (March); 39:147 (April); 39:205 (May); 39:225 (June); 39:266 (July); 39:308 (August) 1933. Ibid. 40:52 (February); 40:81 (March); 40:130 (April); 40:210 (June); 40:240 (July) 1934. Ibid. 41:161 (May); 41:191 (June) 1935.

of these primitive groups knew nothing of modern methods of oral prophylaxis and made little or no effort at mouth cleanliness, dental caries was not controlled by oral prophylaxis but was controlled by nutrition. Further that, since many of these primitive diets have a marked excess of acid over basic elements while some have an excess of base over acid, dental caries is not dependent upon the acid-base balance.

As in the case of the status of the infected pulpless tooth, it was natural that the two schools of thought; namely, those supporting the long established mechanical theory and those supporting the biologic explanation based on nutrition, should disagree as to the procedures essential for establishing adequate preventive programs.

Another important phase of progress of the last quarter century, particularly the closing years, is the development of knowledge relative to the etiology of irregularities of the teeth, the dental arches, and facial form. These have been largely associated with thumb and finger sucking, faulty breathing habits, racial admixtures, premature loss of deciduous teeth, and so on.

Circulation within the hard structures of the tooth has been a matter of much discussion during the past quarter of a century. Important progress toward the solution of this problem has been made by the work of Buest and Bodecker.

In the history of various branches of medical science there is of necessity often a wide lapse between the time of establishment of fundamental new truths and the time of their general clinical application. One distinguished educator states that it takes 40 years for a new discovery to remold the methods of living of the public. In these modern times when people are accustomed to revolutionary changes this factor should be reduced to a fraction of the time. It should not be too much to expect that another quarter century will see the practice of dentistry largely changed from a reparative to a preventive science. The ideals toward which our profession should be striving will not be less than those of the primitive races of the past and present; some of whom are relatively free from both dental caries and disease of the supporting structures of the teeth and from facial and dental arch deformities. If this progress is to be made it will be by obeying nature's laws efficiently as many primitive racial stocks apparently have known better how to do.

8926 Euclid Avenue
Cleveland, Ohio

Dental Practice—1911-1936

(Continued from page 47)

words there is plenty of dental work to be done.

1936 — The streamlined auto; the four mile a minute plane; the railroad cars that streak over the tracks like rockets; air-conditioned homes; and maybe television. Progress all around with the terrible exception of national unrest and war across the seas! Into this kaleidoscopic picture fits somewhere our dental practice; seeking a safe, sane level; trying harder than ever to establish itself as the important profession it is in the welfare of mankind. No more high pressure salesmanship, theatrics, and fees that require a mortgage on the family homestead! Today we have an honest, sincere effort to serve, and dentistry becomes more interesting to the practitioner and more pleasant to the patient. Less than 100 years since the foundation of the first dental school; the first dental magazine; and the first national dental society—the development of dentistry has been phenomenal; and every indication points to its continued progress. Come on you next 25 years!

124 West Ninety-Third Street
New York, New York

DENTAL MEETING DATES

North St. Louis Dentists, seventh annual meeting, Fairgrounds Hotel, St. Louis, January 29-30.

The Pennsylvania State Dental Society and the Philadelphia County Dental Society, combined annual meeting, Philadelphia, February 4, 5, 6.

Pennsylvania State Dental Hygienists' Association, annual meeting, Benjamin Franklin Hotel, Philadelphia, February 4-6.

The University of Buffalo, Alumni Association, Hotel Statler, Buffalo, February 12-14.

Chicago Midwinter Meeting, Stevens Hotel, February 17-20.

Five State Post Graduate Clinic, Wardman Park Hotel, Washington, D. C., March 8-11.

Alabama Dental Association annual meeting, Tutwiler Hotel, Birmingham, April 14-16.

Massachusetts Dental Society, seventy-second annual meeting, Hotel Statler, Boston, April 28-May 1.

Tennessee State Dental Association, sixty-ninth annual meeting, Hotel Peabody, Memphis, May 11-13.

Georgia State Dental Association, sixty-eighth annual meeting, Atlanta, May 11-13.

North Carolina Dental Society, sixty-second annual meeting, Carolina Hotel, Pinehurst, May 11-13.

Dental Society of the State of New York, sixty-eighth annual meeting, Waldorf-Astoria Hotel, New York City, May 12-15.


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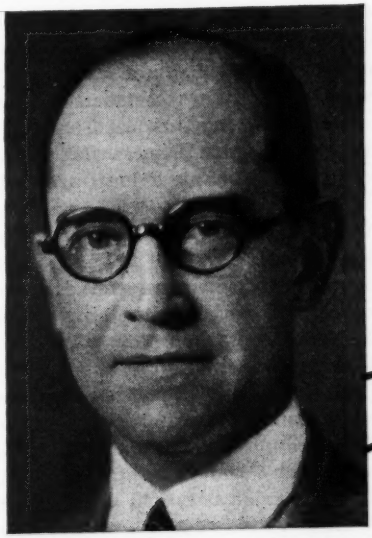


HOWARD R. RAPER D.D.S.

WA BELIEVE YOUR EYES ?

EDITORIAL COMMENT

Give me the liberty to know, to utter, and to argue freely according to my conscience, above all liberties.—John Milton

PUBLICITY IN REVERSE

■ The thirty million persons, more or less, who read the 1300 American newspapers that are members of the Associated Press, had cause for rejoicing this last Thanksgiving Day. In the newspapers that used this press service under the date of November twenty-eighth, Thanksgiving Day, stories were carried concerning a mysterious product of unknown composition that had been developed at Columbia University, New York, for the abolition of dental pain. Of the thirty million persons who might have seen this story, the few hundred thousands who are dental patients were promised a substance that was unknown to the dental profession. This was a case of publicity getting ahead of the available facts.

My patients and the patients of my colleagues came tramping into our offices demanding an application of this unknown, mystic pain killer. We hung our heads in chagrin at having to tell them that we didn't know anything about it and had to admit that the propaganda boys had beat us to the information. But to be certain that we had overlooked nothing in our dental reading, we searched the files of dental periodical literature and among the articles written by Doctor L. L. Hartman, Professor of Dentistry in the School of Dental and Oral Surgery, Columbia University, we could find nothing even remotely touching on the subject of this unknown desensitizing agent. Nor did the Library Bureau of the American Dental Association have any record of a publication by Doctor Hartman on this subject in any of the medical or dental journals. Then

we turned to the Council on Dental Therapeutics of the American Dental Association and found that this mysterious product was likewise unknown in the laboratories of the Council. It was news to its officials as it was to the readers of the 1300 papers that might have carried this Thanksgiving story.

Following the bombardment by dental patients who had read of this promise of painless dentistry, we were fearful that Doctor Hartman had been made the goat of one of the high-powered propaganda boys of Columbia. Things might have been dull on Thanksgiving Day on the campus; some inspired copywriter might have hastily released this story without Doctor Hartman's knowledge or permission. We found, however, in our mail for the day after Thanksgiving, a posed picture released by one of the newspaper photo services showing the discoverer of the substance, "which will revolutionize the practice of dentistry," sitting at a table with a dental instrument in his right hand; a dark, ominous medicament bottle in his left; and a stack of dental publications beside him with the *Journal of the American Dental Association* on the top of the stack.

Doctor Hartman may have an important therapeutic agent—we all trust that he has. We wish to cast no discredit upon him nor upon any work that he has been doing. He enjoys a good reputation in the dental profession; but somebody at Columbia University took a page from the book of the nostrum vendors when he sent out the wild press release. We are criticizing this method of making public the "discovery"—not the therapeutic agent itself. So many desensitizers have come and gone that the profession cannot, of course, be expected to get excited over another drug, the composition of which is unknown. There is, however, an important place in dental therapy for an efficacious drug that can be applied without injection for cavity preparation. We hope that Doctor Hartman has discovered it.

It is pretty generally believed that universities and their professors should be a little above the ribald noise of the market place; that they should publish their observations in scientific publications before public announcement; that they should give qualified persons a chance to examine the "facts" before rushing into print; that they should not make wild, unsubstantiated claims; that they should not give testimonials; that they should not talk of secret substances even though they are patentable under names of universities; and that they

should not make promises and stir up false hopes that they may not be able to fulfill. This type of exploitation coming from a great university, such as Columbia, smacks of the technique of the nostrum promoter. We expect leadership and sound scholarship from universities, not promotional yarns and mysterious drugs. When universities begin to out-ballyhoo commercial interests, we have every reason to be dubious of some of their other efforts.

This whole story is one of publicity in reverse. Wild tales, such as this, may do the dental profession and the public definite harm. Sensationalism has no place in the reporting of alleged discoveries for the relief of human ailments. It is bad enough to smear the newspaper pages with war scares; to make promises of prosperity around some distant corner; to exploit crime news; but it is far more reprehensible to promise the public relief from dental pain when the profession isn't even familiar with the principle upon which the alleged discovery is based. Publicity of this kind in reverse, by destroying the faith of the American people in dentistry, can do more harm than the ballyhoo can do good to Columbia University—even if the University may be angling for an endowment.

To add more weight to this alleged discovery three other commentators on the American scene have carried stories on the subject. That seer of Broadway, Mr. Walter Winchell, has given his famous orchids as awards for the heroism displayed "by the 500 persons who volunteered to be the guinea pigs for the Columbia Dental School of experiments." (We assume that one day the scientific records of these experiments will be available for study by the profession.) The second commentator, better known for the spectacular method in reporting medical discoveries than for impersonal, scientific writing, was the magazine *Time*, which quoted the organized dental profession of New York as sending up a hosanna of this type: "Eagerly awaiting details, grateful spokesmen for New York City's 3,000 organized dentists cried, 'We hail Dr. Hartman's discovery as a miraculous advance. . . .' " The Literary Digest in a somewhat calmer statement quoted the Dean of the Columbia Medical School, W. C. Rappeleye, as follows: "One of the most outstanding contributions to the practice of dentistry."

As a sequel to this story we are not surprised to find the Hearst newspapers editorializing on this subject pointing out

that the *cost of dentistry* should next be made painless: "There only remains one more great scientific step to be taken toward complete painless dentistry, and that is to eliminate the bill." This may be humor or it may be a serious suggestion—or even a forerunner of health insurance propaganda. In any case, this sequel is in the same reverse gear as the original Columbia promotional story.

To this recent record of flamboyant publicity must be added the contribution by Mr. Benarr Macfadden, publisher of *Liberty*, who sees himself as a contender for the Presidential nomination: "I have been teaching everything that has to do with health and vitality throughout the nation for approximately fifty years, and my unusual success in calling attention to our physical troubles should not in any way affect my ability to detect political ills." The same issue of *Liberty*, December 14, 1935, in which Mr. Macfadden expresses this grandiloquent sentiment carries on the cover page that trite, old picture of the boy with a bandaged jaw writing "liar" after the sign "Painless Dentist." We have no wish to protect the "painless" practitioner from any criticism, however strong, but we do object to the type of propaganda that points fingers at every dentist. If this is Mr. Macfadden's concept of public health educational effort—to arouse in American children fear of *all* dentists—we hope that his Presidential activities will meet an early and painless death.

What can be done to counteract this unfavorable kind of publicity? In my opinion the American dental profession might profitably copy the American Medical Association whose spokesmen are always ready and alert to pounce on all persons who threaten to injure the public relations of the medical profession. Ability, authority, and courage are required to carry on such activity; the ability to circulate the rebuttal as widely as the offending story; the authority to inspire confidence in the public mind; the courage to step on toes even if they are those of men in high places—of these three, the greatest is courage.

Edward J. Ryan

Dental Philanthropy

1911-1936

by Harvey J. Burkhart, D.D.S., LL.D.
and John Oppie McCall, D.D.S.

■ Behind the record of George Eastman's intense interest in dental problems is the story of a man who undertook any philanthropic enterprise only after a careful investigation and study to determine whether the project was worth while. Mr. Eastman was always willing to receive information and advice from others, but when the final decision was reached it represented his own judgment on the feasibility and value of the project. That he never regretted his decision in so far as dentistry was concerned is evident from his letters.

In writing to Doctor D. B. Irwin, in 1919, Mr. Eastman said:

"What appealed to me in connection with the Dental Dispensary[1] was that I concluded I could get more results for my money in that expenditure than in any other philanthropic scheme I had investigated. Several years' experience with its operation leaves me still with that opinion. . . . Money spent in the care of children's teeth is one of the wisest expenditures that can be made."[2]

To Cyrus H. K. Curtis of Philadelphia he wrote on June 18, 1928:

"My experience with the

[1]Doctor Harvey J. Burkhart is the Director of the Rochester Dental Dispensary, Rochester, New York.

[2]Burkhart, H. J.: Centennial History of Dentistry in Rochester, Reprinted from Volume IV, Centennial History of Rochester, New York, Page 295, 1934.

Dispensary here, of almost eleven years, has convinced me that money spent in giving the children of the poor, good teeth, earns greater results per dollar spent in health, happiness, and efficiency than if spent in any other way."[2]

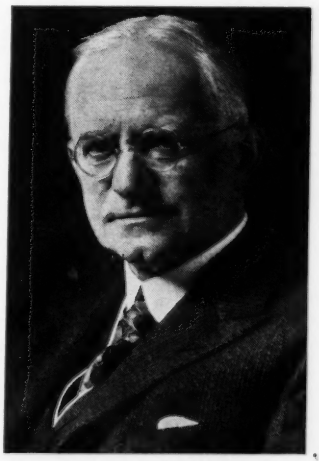
Undoubtedly, the person to whom the greatest credit is due for first interesting Mr. Eastman in the dental clinics established by the Rochester Dental Society, and later in the founding and organization of the Rochester Dental Dispensary, was Mr. William Bausch, a close friend and associate of Mr. Eastman in various public enterprises in Rochester.

In his book entitled GEORGE EASTMAN, Carl W. Ackerman[2] has given what, in my opinion, is the best record ever published of the establishment of the Rochester Dental Dispensary and Mr. Eastman's interest in children's dentistry.

"Eastman's active interest in dentistry began in January, 1909, when he made his first contribution to the Rochester Dental Society," Mr. Ackerman reports. "This was the beginning of a series of yearly payments which had no relationship, even in his own mind, with the evolution of the use of x-ray plates or film in dental practice or diagnosis. He had long since made it a definite policy not to mix business with philanthropy."[3]

In March, 1914, Mr. Eastman became interested in the preventive work being done at the Forsyth Dental Infirmary in Boston. After visiting that institution he began to vision the possibilities of a similar project in Rochester, but it was not until July 6, 1915, that his ideas on the subject had crystallized. At this time he accepted the tentative proposals that Mr. Bausch had made for the requirements governing the establishment of the Dispensary.

Through the efforts of Mr. Bausch the board of trustees of the Dispensary was organized with a membership



GEORGE EASTMAN

[3]Ackerman, C. W.: George Eastman, Houghton Mifflin Co., page 385, 1930.

of fifteen business men, each of whom contributed $1,000 a year toward the expense of maintaining the institution at the outset and for several years thereafter. The city of Rochester contributed $20,000 a year for doing the prophylactic work in the schools and agreed for the next five years to make an annual appropriation for this work.

DISPENSARY OPENED

Plans for construction went ahead rapidly, and on October 15, 1917, the Dispensary was opened; its dental department being provided with thirty-seven operating units especially designed, and a provision made for thirty-one additional units. One of the most important departments was that of orthodontia.

Prophylactic squads, composed of licensed dentists and of dental hygienists, the latter trained in the Dispensary, took care of cleaning the teeth of children in the schools throughout the city. Provided with portable equipment consisting of chairs, engines, instruments, and sterilizers, and under strict supervision, they made the rounds of the schools twice a year. Following the prophylaxis of the teeth, the mouth was examined for pathologic conditions, and if additional dental service was necessary, records in duplicate were made; one for the teacher and parent, and the other for the Dispensary, so that each case could be followed up. A school lecturer was employed by the Dispensary to deliver illustrated lantern-slide lectures on oral hygiene and other subjects related to health.

When the Rochester Dental Dispensary was established, Mr. Eastman had said that, if its work was satisfactory at the end of five years, he would endow it with a sum of $750,000. Because he was so pleased with its development, he made this contribution before the end of three years, and in addition added $250,000 for endowment purposes. Again, in 1920, he made another contribution, which together with the amount bequeathed in his will brought the total endowment of the Rochester Dental Dispensary from Mr. Eastman to approximately three and a half million dollars.

Among many prominent persons who became interested in the work of the Dispensary was the late Julius Rosenwald of Chicago, who had at that time sponsored a survey of dentistry by Doctor Michael M. Davis of the American Hospital Association Service Bureau. In commenting favorably on this

Top Photograph—Architect's Conception of Eastman Dental Clinic in Paris, France.

Bottom Photograph—Eastman Dental Clinic, Rome, Italy.

Eastman Dental Clinic, London.

survey, Mr. Eastman wrote to Mr. Rosenwald August 15, 1921, asking that a statement be included in the survey giving the reason why the centralized dental clinic was to be preferred to the separate clinics:

". . . the question as to whether we would have separate clinics or one centralized institution was very carefully gone into before the Dispensary was built, and I finally declined to have anything to do with the enterprise if separate school clinics were to be established. The reason for this was that it is impossible to properly supervise small clinics. It is necessary to have as operators

Eastman Dental Clinic, Brussels.

young, immature dentists who cannot be allowed to work without very close supervision. No clinic, therefore, should be smaller than will warrant the employment of a first-class supervisor on the spot."[4]

In the opening of many of those closely associated with Mr. Eastman since 1915 in his various philanthropic enterprises the accomplishments of the Rochester Dental Dispensary interested him more than any other single activity. This was evidenced by the close attention which he gave to the institution, by the frequent visits which he made to it, and the interest he displayed in all the details of its management. He had an intelligent grasp and understanding of the various health problems, and believed that the prevention of disease is more important than its treatment.

EUROPEAN CLINICS

A few years after the founding of the Rochester Dental Dispensary, Mr. Eastman was so impressed with the value of the service rendered that he expressed a desire to have demonstrations made of a similar nature in Europe. This object was discussed on a number of occasions with the Director of the Dispensary who expressed cordial and sympathetic approval of the idea.

In 1925, a proposition was made to Lord Riddell of London regarding the establishment of a clinic in that city with the understanding that Mr. Eastman would contribute $1,000,000 for the erection and equipment of the building, and any balance remaining should be placed in an endowment fund, the income of which was to be used for orthodontic purposes. Lord Riddell, Sir Albert Levy, and the authorities of the Royal Free Hospital at once accepted this proposition, and the London Clinic was built and its dedication took place November 20, 1931. Under a similar agreement, except that the guaranty for maintenance and upkeep was made by the Italian government, an Eastman Dental Clinic was established in Rome and dedicated by Benito Mussolini on April 21, 1933. In Brussels,[5] the newly erected Eastman Dental Clinic was opened formally in August, 1935; and the foundation stone for a similar institution was laid in Paris this year. It is expected that the fifth Eastman Dental Clinic will be dedicated in Stockholm in the spring of 1936, according to plans and specifications prepared and approved by Mr. Eastman before his death.

Mr. Eastman made these contributions of one million

[4]Footnote 2, page 301.

[5]Eastman Dental Clinic Opened in Brussels ORAL HYGIENE 25:1681 (December) 1935.

dollars each for the five clinics in Europe, it should be understood, with the idea of making demonstrations rather than with the thought that they would provide dental service for all of the children in the various cities. It should also be noted that the service in these dispensaries is limited to the care of the teeth of children whose parents are unable to pay for dental treatment and to provide such care as will keep the teeth in good condition until the age of sixteen. It does not include the education of dentists except for the information they incidentally acquire by this work after the completion of their dental education. In these clinics excellent opportunities are presented for postgraduate instruction and practice in children's dentistry.

The amounts contributed by Mr. Eastman to dentistry are approximately as follows:

Contributions to school clinics in Rochester from 1909 to 1915	$ 100,000
Rochester Dental Dispensary (building, endowment, etc.)	3.500.000
Eastman Dental Clinic in London	1,000,000
Eastman Dental Clinic in Rome	1,000,000
Eastman Dental Clinic in Stockholm	1,000,000
Eastman Dental Clinic in Brussels	1,000,000
Eastman Dental Clinic in Paris	1,000,000
Contribution to International Dental Federation	2,500
Meharry Dental School, Nashville, Tennessee	200,000
	$8,802,500

In addition to the foregoing contributions, Mr. Eastman, in 1920, became a partner of the Rockefeller General Education Board in the establishment of the School of Medicine and Dentistry of the University of Rochester, when each contributed $5,000,000 for this project. Later on, additional contributions were made both by the General Education Board and Mr. Eastman. On account of Mr. Eastman's interest in dentistry, one-half of his contribution for medical and dental education to the University of Rochester, at least $2,500,000, may be assumed to have been for dentistry, which makes an approximate grand total of over $11,000,000 as Mr. Eastman's contribution to dentistry.

800 Main Street East
Rochester, New York

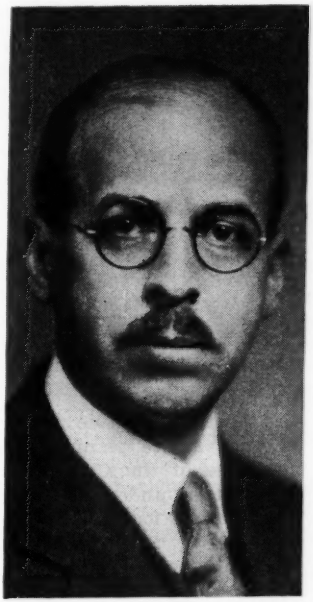
THE MURRY AND LEONIE GUGGENHEIM DENTAL CLINICS

By JOHN OPPIE McCALL, D.D.S.

■ The idea of the Murry and Leonie Guggenheim Dental Clinic began to take form in the minds of Mr. and Mrs. Murry Guggenheim nearly fifteen years ago when they heard of the dental dispensary founded by the Forsyth

brothers in Boston, which had been visited by one of Mr. Guggenheim's brothers. Desirous of doing something that would bring lasting benefit to large numbers of poor children of New York City, they turned to the thought of dental care, so badly needed and so difficult for these children to obtain. They adhered to this idea after giving consideration to the argument in favor of an endowment for one of the New York dental schools put before them later by a New York dentist.

The decision to found an institution for dental philanthropy was finally reached in 1929 after consultation with S. S. Goldwater, M.D., hospital consultant, former Health Commissioner of New York City, and at present Commissioner of Hospitals in New York. Doctor Goldwater's interest in having dental care provided for the needy children of New York and his willingness to undertake the development of the project were the deciding factors in Mr. Guggenheim's decision, according to a statement made by him to Mayor LaGuardia on the occasion of a visit the Mayor made to the Clinic. Following the incorporation of the Clinic, a Board of Directors was chosen, with Doctor Goldwater as consultant. Next an Advisory Board with adequate dental representation was appointed



JOHN OPPIE MCCALL, D.D.S.

and Alfred Walker, D.D.S. was named chairman.

To Doctor Goldwater goes chief credit for the planning of the building which is admirably adapted to its purpose, and for the general administrative set-up of the Clinic. This plan included the establishment in December, 1929, of a two chair dispensary located near one of the public schools in the district that the Clinic would ultimately serve. This gave an opportunity to visualize the dental problems that would be encountered and to plan

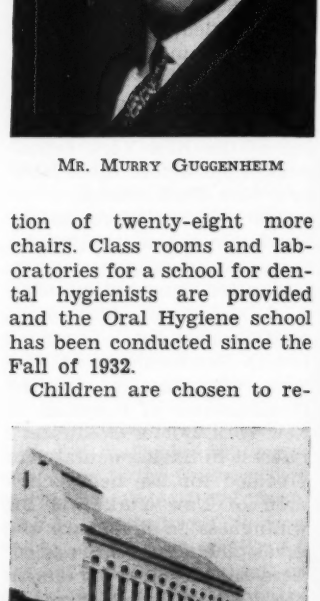
MRS. LEONIE GUGGENHEIM

MR. MURRY GUGGENHEIM

the technical routine to be followed. Active planning of the home of the Clinic was then gotten under way and the building, located at 422-428 East Seventy-Second Street, in the heart of one of New York's poorest districts, was completed and opened for active service in the Fall of 1931.

The land, building, and equipment represent an outlay of approximately one million dollars; salaries and other expenses total one hundred thousand dollars annually. The entire philanthropy was established by and receives its sole support from Mr. and Mrs. Guggenheim. The building has five floors, of which four are now being used. There are thirty-five dental chairs and units, and an additional chair for taking roentgenograms, with provision for the ultimate installation of twenty-eight more chairs. Class rooms and laboratories for a school for dental hygienists are provided and the Oral Hygiene school has been conducted since the Fall of 1932.

Children are chosen to re-



Guggenheim Clinic

ceive this service on the basis of financial status only. The school teacher, who is in an excellent position to know the economic condition of the children under her, makes the selection. This choice is, however, subject to confirmation by the Clinic; a trained social service worker on the Clinic staff investigates all cases in which there is a suspicion that the parents could afford the services of the private dental practitioner. As a result of the care exercised, excellent feeling exists among the dentists in the neighborhood, the local dental societies, and the Clinic.

No dental examination is made before admittance to determine whether the child needs dental care. All children admitted are examined and roentgenograms are made of every child's teeth. If children are found to be free from caries, which happens all too seldom, they are at least given periodic prophylactic treatment. All children are given toothbrush drill in a room equipped for that purpose. Because of the method of selection, the Clinic enrollment constitutes a reliable cross section of New York City's underprivileged children as regards both dental and general health conditions.

No fees are charged for any of the dental treatments given the children. Since the opening of the so-called "Experimental," or small, Clinic, 19,593 children have been treated (as of October 31, 1935). This includes preschool children between the ages of 2 and 6 and school children up to 14. Limitation of admissions to children in the school district in which the Clinic is situated has made it possible to set up a schedule for regular attendance from the nineteen schools being served, the children being transported to and from the Clinic in a bus provided by the Board of Education. This plan of operation also makes it possible to recall patients at desired intervals (usually six months) for examination, prophylactic treatment, and necessary corrective treatment. Experience has indicated the ultimate economy of such a program.

The most serious problem encountered, aside from the finding that dental caries is nearly universal among school children (98 per cent), is the high incidence of dental disease in the preschool child. Nearly 50 per cent of the two-year old children examined have caries; the percentage jumps alarmingly with each succeeding year. In the five-year old group, 92 per cent have dental caries. True economy of service as well as the physical welfare of the child demands the institution of regular dental care at two years of age. One of the most

(*Continued on page* 79)

DEAR ORAL HYGIENE

"I do not agree with anything you say, but I will fight to the death for your right to say it."
—VOLTAIRE

LET BOSTON SPEAK

Apropos of Doctor Dunn's letter[1] in the October DEAR ORAL HYGIENE and for a bit of fun, I am appending the following:

While in Cleveland a dental patient may vulgarly be instructed to *spit*, and in New York indelicately told to *expectorate*, Boston refrains from such crass expressions through the innocuous idiom, "free the mouth, please."—CHARLES M. PROCTOR, D.M.D., Sc.D., 19 *Bay State Road, Boston, Massachusetts.*

IN DEFENSE OF DOCTOR RICHARDSON

It is heartening to note the generous response of helpful discussion given Doctor Frank H. Richardson's[2] recent article by members of our profession from all over the United States.

I am surprised however that members of our profession should presume to wax caustic in criticism of an honest seeker after knowledge, and with an air of smug complacency, sit back "in the peace of their self-content" with that "holier than thou" attitude, wrap their togas about them with the offensive superciliousness so evident in the ironic, sarcastic few who so rudely slapped the wrist of a professional confrere.

None of us is so wise that he has any right to criticize or deny others of the craft the same helpful benefits of knowledge we seek ourselves. We may, and do, honestly and sincerely disagree on many points of professional procedure—that is neither here nor there—but that man who refuses to share with his brother or friend adds nothing to his own brain power; nor does he reflect any dignity, charity, or credit on our profession.

The evidence of true greatness is to be found among those who have given most unstintingly of their time and knowledge to the world. Wealth is not measured in mere dollars and cents, but in service to one's fellow men.

"He who steals my purse, steals trash—
But he who filches from me my good name
Takes that which ne'er enriches him
And makes me poor indeed."

All honor to Doctor Richardson.—HENRY C. WOODS, D.D.S., *Garnett, Kansas.*

[1]Dunn, F. A.: "Expectorate, Please," ORAL HYGIENE In Dear Oral Hygiene department, 25:1408 (October) 1935.

[2]Richardson, F. H.: A Physician Asks for Dental Aid, ORAL HYGIENE 25:1216 (September) 1935.

REQUEST FROM DOCTOR MECOM

In response to my article THE LIFE OF A COUNTRY DENTIST[3] published in the October issue of ORAL HYGIENE I received interesting letters from a large number of dentists. Much to my regret all of these letters, together with other papers and personal belongings, were stolen before I had time to reply to them. As many of these letters contained requests for information about the conduct of a country dental practice, I wished to answer them personally. If the dentists who wrote to me will write again, restating their questions, I will be glad to give them whatever assistance I can.—WILBER E. MECOM, D.D.S., *Wisner, Louisiana.*

SILVER NITRATE STAINS

Several months ago we accidentally spilled silver nitrate on the vitrolite top of our cabinet. We tried every known method of removing it, including the iodine-ammonia combination, and also a muriatic acid solution, but the unsightly stains stubbornly persisted.

A week ago, by chance, we discovered that they could be removed by rubbing the stains with the finest grade of sandpaper, moistened slightly.

With the thought that another reader may have had the same experience with silver nitrate stains, we suggest this method of removal.—G. W. PIFER, D.D.S., 225 *Sandusky Street, Findlay, O.*

[3]Mecom, W. E.: The Life of a Country Dentist, ORAL HYGIENE 25:1364 (October) 1935.

The Murry and Leonie Guggenheim Dental Clinics

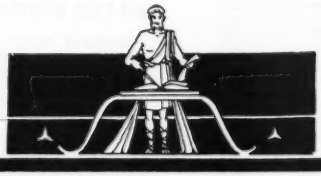
(*Continued from page* 77)

encouraging experiences at the Clinic has been the finding that the two-year old child, far from being a difficult patient to work for, is the most cooperative patient, provided he is introduced properly to the dental routine.

Editor's Note: Another significant benefaction to dentistry was reported in the November, 1935, issue of the *Journal of the American Dental Association.*

422 East Seventy-Second Street
New York, New York.

According to an announcement made by Doctor W. H. G. Logan, Dean of the Chicago College of Dental Surgery, an unnamed Chicago philanthropist has donated funds for the establishment of a foundation for dental research in the Dental School of Loyola University. It is to be called "The Foundation for Dental Research of the Chicago College of Dental Surgery," and a fund of $25,000 as a minimum will be available for its work annually.



Ask ORAL HYGIENE

Please communicate directly with the Department Editors, V. CLYDE SMEDLEY, D.D.S., and GEORGE R. WARNER, M.D., D.D.S., 1206 Republic Building, Denver, Colorado, enclosing postage for a personal reply. Material of general interest will be published each month.

LUDWIG'S ANGINA

Q.—On examination I found that one of my patients, a girl, had a partly broken mesiolingual wall of a lower right molar, a condition that had been present for two months; the pulp of this tooth having been removed two years before. Neither the tooth nor her tongue had been sore at any time.

She had an appointment with me on Thursday, and the following Monday she was forced to leave school and go to see a throat specialist, who diagnosed her case as Ludwig's angina caused by an infected tooth. Tuesday, the following day, the girl came to my office on the way to see the specialist.

There was a grayish white swelling about the size of a lima bean on the under surface of her tongue for an equal distance on both sides of the frenulum. The plica sublingualis stood out prominently against it and was of the same color. The tongue was turned a little upward and backward at the apex, and there was a little fullness in the throat on swallowing. The swelling was soft but not sensitive.

This swelling was incised by the specialist and no definite indication of pus was found. The patient was confined to bed and given a mouth irrigation every two hours. A slight trismus appeared on the third day and the patient's temperature was 99.2° F. The fourth day there were signs of improvement, and the patient could use her tongue more easily.

A roentgenogram of the tooth showed an abscess, but the oral surgeon refused to extract the tooth until the other condition had been cleared up.

I have read Mead's[1] CELLULITIS in the Journal of the American Dental Association and Hyde's[2] article in another issue of the same publication on LUDWIG'S ANGINA.

In this case no operative work was done by me.

Could you explain why this swelling formed under the tongue and not in the submaxillary region if the infected tooth

[1]Mead, S. V.: Cellulitis, J. A. D. A. 20:1190 (July) 1933.

[2]Hyde, W. P.: Ludwig's Angina and Cervical Cellulitis (Differential Diagnosis) J. A. D. A. 20:2046 (November) 1933.

was the cause?—W. J. B., California.

A.—Infected mandibular teeth, even though they have not been removed, sometimes cause Ludwig's angina. However it more commonly follows rather extensive operative procedures; that is, the removal of several infected teeth. It may also come hematogenously, although this is rather rare. Just why this greatest amount of swelling was under the tip of the tongue rather than at the base of the tongue, as usually happens, I cannot say; each case being a law unto itself.

The treatment evidently was carried out well; the oral surgeon was wise not to remove the tooth until the acute condition had been relieved.

We had a case referred to us about three years ago from an outlying town. The condition had been going on for about a week; drainage had not been instituted. Hot packs had been applied externally, and mouth washes and analgesics for control of pain had been used. We immediately put in drainage but the condition grew worse and the patient lived only three days. I am citing this case to show you how serious this condition may become if active treatment is not started at once. The interesting and remarkable thing about the case I just cited is that no source of infection was ever discovered; the teeth were all vital; the gums were healthy; and the mouth had been kept scrupulously clean. You will find a full discussion of Ludwig's angina in Mead's ORAL SURGERY.[3]—GEORGE R. WARNER.

CONSTRUCTION OF DENTURES

Q.—About two years ago I placed full upper and lower dentures for a patient, a woman. A few days ago she came in and complained of a clicking sound and the sensation of air rushing through her right ear. She said this condition developed about the time the dentures were inserted and wished to know if the dentures had anything to do with these annoyances, which occur when she closes her jaws.

Can you give me any information on this subject?—G. E. O., Kansas.

A.—Such a condition might be caused by too great a closure of the bite and loss of the vertical dimension of the face. You could test this by building up with compound under her dentures to open the bite. Let her wear them with the compound in place for several days to check results. You can add to it or lessen it, thus testing the bite at various levels.—V. C. SMEDLEY.

[3]Mead, S. V.: Oral Surgery, Saint Louis, C. V. Mosby Company.

LAFFODONTIA

A little boy upon returning from a visit to his dentist remarked to his daddy, "The doctor found two empties."

Three shop girls were enjoying a selection by the orchestra.

"Isn't it divine! Wonder what they're playing?" said Madge.

"It's the 'Sextette from Lucia,'" announced Tillie, positively.

"No, it's 'Tales from Hoffman,'" persisted Annabelle.

"I think you are both wrong; but there's a card up there—I'll go and see for myself!" announced Madge, suiting the action to the word. She came back triumphant.

"You're way off, girls! It's the 'Refrain from Spitting.'"

"Are you going to take this lying down?" boomed the candidate.

"Of course not," said a voice from the rear of the hall, "the shorthand reporters are doing that."

Wife: "I didn't like the looks of that stenographer you engaged, so I discharged her this afternoon when I was in your office."

Man: "Before giving her a chance?"

Wife: "No, before giving you a chance."

A long-legged sheep in the Himalayas is able to run forty miles an hour. That's the kind of little lamb to follow Mary nowadays.

Mother: "Why were you kept in after school today, Junior?"

Junior: "The teacher told us to write an essay on 'The Results of Laziness' and I turned in a blank sheet of paper."

Jennings: "Well, Jacobs, and how is your son getting on, the one who was a ventriloquist?"

Jacobs: "Nicely, thanks, he's in the bird shop selling parrots."

Doctor: "You must avoid all forms of excitement."

Male Patient: "But, doctor, can't I even look at them on the street?"

First Diner: "That waiter is either a fool or a humorist."

Second Diner: "What's the matter?"

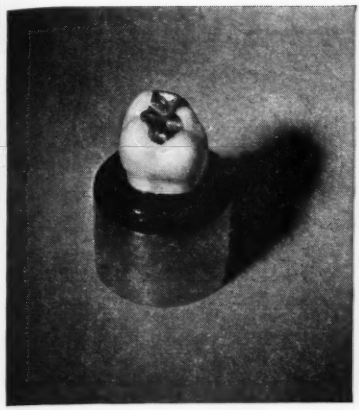
First Diner: "I ordered extract of beef and he brought me a glass of milk."

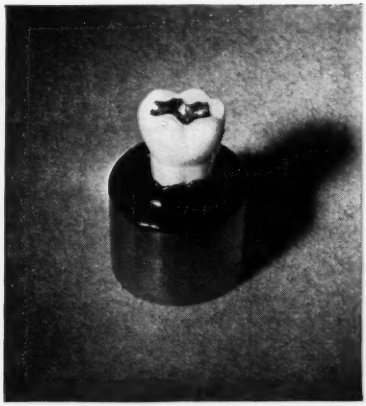
Actor (to actor friend in hospital awaiting an operation): "Well, I must go now—cheerio—best of luck on your opening night!"

Wife (angrily to her drunken husband): "I suppose you expect me to believe you came straight home from the office."

He: "Sure I did" (hic); "I came home just like the crow flies."

She: "So I see. Stopping frequently for a little corn."





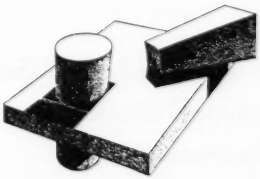
"Any gold?"—or INLAY gold?

The majority of inlays require a gold of medium hardness and high burnishability which will cast cleanly and densely. These qualities are characteristic of NEY-ORO A-1, "the inlay gold for inlays."

NEY-ORO A-1 $2.00 per dwt.

NEY-ORO A-10 $1.87 per dwt.
(an inlay gold of similar properties)

It costs no more to use the peg that fits.



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Looking Ahead!

Oral Hygiene should be congratulated and we look forward to the day when they celebrate their Golden Anniversary.

Incidentally, gold restorations being constructed of Dee Gold will be doing service 25 years from now.

DEE & CO. blazed a trail by developing precious metal alloys under the guidance of scientific testing. It has provided a noble profession with noble metals that serve well.

●

When you specify Dee Gold you get working qualities and physical efficiency—a metal that has kept pace with developments.

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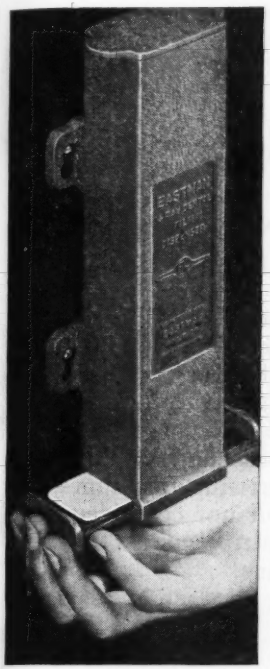

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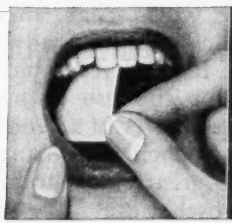

Out of the Dispenser . . . Into the Mouth . . . Into the Receptacle

NOT just any film in a proper-size packet is adequate for periapical dental radiography . . . Exacting requirements must be met.

For this reason Eastman provides in Radia-Tized Film every special quality necessary for best possible results. Emulsion is coated on both sides of a *safety* (cellulose acetate) base to reduce exposure time, yet assure maximum detail and high contrast. A protective coating guards the emulsion surfaces against abrasions and crimp marks. The packets are white, machine-made, sanitary, comfortable.

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For greatest economy, standardize on these finest films . . . use them this most efficient way.

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Please send me "Dental Radiography and Photography" regularly.

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TWENTY-FIVE YEARS OF PROGRESS

"We Live in Deeds, Not Years"

WHEN Oral Hygiene first appeared 25 years ago, The Dentists' Supply Company of New York was represented. Our advertising has appeared in each succeeding issue. In presenting the advantages of our products we have been unconsciously telling the world that, in our opinion, Oral Hygiene is an excellent advertising medium—long may she live! Neither habit nor coincidence can account for the use of multiple pages in a magazine for a quarter of a century!

Dentistry has come far during the last 25 years, but easily the greatest progress has been made in the field of prosthetics.

It has always been natural for The Dentists' Supply Company to look forward, but Oral Hygiene's Twenty-Fifth Anniversary provides an excellent milestone from which to look back over the road and take stock of what has been accomplished during the journey.

Long before "O.H." appeared, "Dentsply" began introducing ideas and products that still contribute to the convenience, profit and advancement of Dentistry. Just to list them may prove interesting to the younger men and serve to remind the older ones of some things with which they have grown so familiar that they think they have always been.

Soldered-In Pins

Soon after The Dentists' Supply Company was

organized we introduced Soldered-In Pins and the Split-Ring Anchorage (the Twentieth Century Principle), resulting in a stronger attachment. Every tooth manufacturer now uses some form of soldered-in pins, but *not* the Split-Pin Anchorage, which is the "Key" to the principle.

Millimeter Measures

We were the first to publish the measurements of our teeth in millimeters and first to provide celluloid millimeter gauges so that dentists could order teeth of suitable size without sending models or going personally to select teeth. This service has become well-nigh indispensable to the profession.

Mould Guides

We were the first and, for some years, the only tooth manufacturer to provide Mould Guides for the selection of teeth. A Mould Guide is actually a complete sample line of a type of teeth (Vulcanite Teeth, Facings, Crowns, Tube Teeth, etc.), and every dentist who has a comprehensive series of our mould guides and uses it intelligently knows that a Mould Guide is as necessary to the proper selection of teeth as a Shade Guide. Of course other manufacturers followed as a matter of course.

Anatomical Posteriors

In 1909 the introduction of the Twentieth Century Anatomical Posteriors marked the first improvement in posterior teeth in the history of dentistry. They simplified articulation, increased masticating efficiency and, through the technic book, "The Mechanical Side of Anatomical Articulation," (distributed by the thousands), assisted prosthetic instructors in simplifying the teaching of sound technic. Of course others copied the teeth—but not the initiative!

"Brother Bill" and Dental Economics

Not the least of our contributions to the progress of dentistry was bringing the discussion of dental economics out in the open through the writings and papers of Dr. George Wood Clapp, whose "Brother Bill" series has been credited with the economic salvation of thousands of dentists. His book, "Profitable Practice," was the first attempt to establish average costs of various types of services, upon which any sound economic plan must rest.

Trubyte Teeth

The Dentists' Supply Company was the only tooth manufacturer with sufficient foresight and initiative to recognize the value and to undertake the labor and expense of developing the epoch-making discoveries of Dr. J. Leon Williams and Prof. Alfred Gysi which resulted in the introduction of Trubyte Teeth in 1914. We offered in Trubyte Teeth the first and, until the introduction of our New Trubyte Teeth in 1931, the only artificial anteriors which harmonize with face forms and conform to the typal theory of tooth selection and also the only bicuspids and molars carved in harmony with mandibular movements and engineered to the requirements of mastication for the edentulous. Trubyte Teeth proved to be the greatest spur to Prosthetic Dentistry since the discovery of vulcanite. Attempts have been made to copy them, but the originals are always preferred.

Gysi Technic

We made it possible for Dr. Gysi to visit America and through his classes made available to the profession in America the Gysi system of denture restoration, the only system which has survived without any change in its fundamentals. Today

the name of Gysi stands preeminent in the science of engineering as applied to artificial posterior teeth, the registration of mandibular movement and the problems of mastication for the edentulous. On the principles he introduced through our Company has been built practically all that has endured in the progress of full denture restoration.

Articulators

The first scientific articulator capable of reproducing individual mandibular movements (the Gysi Adaptable Articulator) was imported and distributed by The Dentists' Supply Company. This was followed by the first simple articulator with fixed adjustments capable of reproducing mandibular movement with scientifically determined average condylar inclinations (the Gysi Simplex Articulator). With the supply of Gysi Adaptable Articulators cut off by the war, the insistent demand for an adjustable articulator brought the Gysi Trubyte Articulator, which is in current demand.

Pins, Pointed and Gold-Clad

Introducing Pointed Pins for facings was another "first" for our Company. Gold-Clad Pins for "vulcanite" teeth were "first" used on Twentieth Century *Solila* Teeth. Others now offer a *form* of these improvements which we pioneered.

New Trubyte Teeth

One would think that, instead of attempting to copy Trubyte Teeth, others would have offered some improvements during the 17 years which elapsed between the introduction of Trubyte Teeth (1914) and the introduction of *New* Trubyte Teeth (1931), but no one did. Long, arduous and expensive research on tooth color, size and form was undertaken, and *New* Trubyte Teeth were produced and

offered in 1931. The marked improvements in Shades, alone, as a result of an entirely new method of blending, were instantly recognized. New sizes and new proportions were added, and, in spite of adverse economic conditions, New Trubyte Teeth have taken their place as another advance in the art of denture prosthesis.

New Trubyte 20° Posteriors

We have just introduced a new series of bicuspids and molars known as "New Trubyte 20° Posteriors." With shallow cusp inclinations and occlusal surfaces formed by the normal functional movements of the mandible and engineered to efficiency in mastication for the edentulous, the immediate and enthusiastic reception accorded these new "20°" posteriors bids fair to eclipse all previous records. Again the Gysi principles prove triumphant.

We have not attempted to mention *all* of the improvements and innovations which have been introduced and fostered by us. We were the first to provide demonstration and teaching courses when there was no provision for postgraduate study under professional educational auspices. Literally hundreds of small but useful services introduced by us to the profession, to laboratories and to dental dealers have made the handling of teeth and tooth stocks easier and more systematic, all of which find their way through to the profession in better service and pleasanter relations.

There is nothing boastful in the spirit in which the foregoing has been presented. We only feel that once in 25 years it is entirely proper to remind our readers of some of the more important contributions of this Company to the progress of dentistry which, in the ordinary course of events, are soon forgotten.

Now we shall look ahead and devote ourselves to the task of developing and producing all that is best in artificial teeth and accessories and to rendering such a type of service to the profession that it may continue to serve the public on the plane that has made American Dentistry famous.

"Carry on!"

The Dentists' Supply Company of New York

Improvements which The Dentists' Supply Company has made possible during the past twenty-five years have increased the income of the Dental Profession at least

$500,000,000

The time-proved vitamins of

COD LIVER OIL

concentrated in convenient, modern

LIQUID—TABLETS—CAPSULES

Here are the vital therapeutic factors of that world recognized agent, cod liver oil, concentrated, as a result of original research, into convenient, palatable, economical forms suitable for every type of patient.

White's Cod Liver Oil Concentrate in Liquid, Tablet and Capsule form is 100 times the potency of cod liver oil* in *both* vitamins A and D. Furthermore, these natural vitamins are not fortified by materials from other sources, and are presented in the relationship of A to D characteristic of cod liver oil.

A DOSAGE FORM TO SUIT EVERY PATIENT

LIQUID CONCENTRATE. Two drops equal the vitamin A and D potency of one teaspoonful of Cod Liver Oil*. Usual prescription price $1.00 for 240 drops (5 cc.)—the equivalent of 120 teaspoonfuls of Cod Liver Oil*.

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CONCENTRATE CAPSULES. Each capsule equals the vitamin A and D potency of 4½ teaspoonfuls of Cod Liver Oil*. Usual prescription price $1.00 for 24 capsules—the equivalent of 108 teaspoonfuls of Cod Liver Oil*. Larger packages at even more economical prices.

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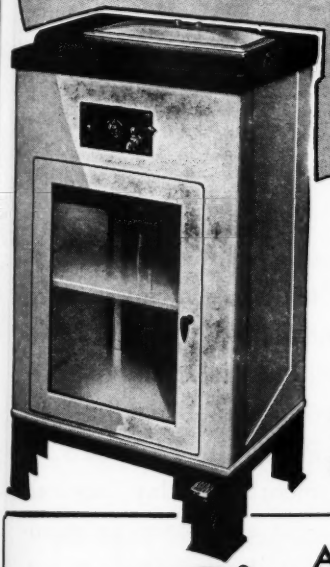
Before ORAL HYGIENE was born, doctors were using...

PROMETHEUS STERILIZERS



TEN years before the first issue of Oral Hygiene—35 years ago—Prometheus was already making strong, efficient sterilizers that doctors were proud to own. These 35 years of experience have resulted in this—the Aristocrat—the lowest priced, fully automatic cabinet sterilizer you can buy anywhere. The Aristocrat has a cast bronze boiler, a convenient foot-lift, and an automatic cut-off that saves current. It also has a beautiful, heavy cast porcelain top. The Aristocrat comes in white and colors.

Price
$82.50

A NEW SPOTLIGHT by PROMETHEUS

No glare or shadow

No glare or shadow yet throws a brilliant, concentrated light, soft and restful to the eyes. Beam can be controlled, and kept out of patient's eyes. No glare—in operator's or patient's eyes.

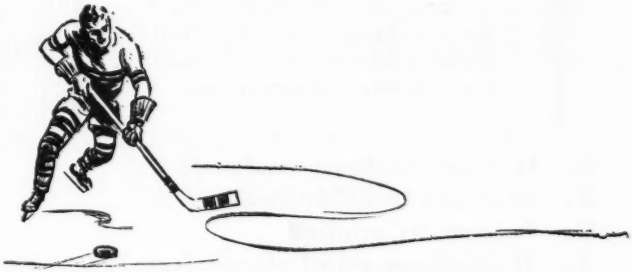
PROMETHEUS ELECTRIC CORP.
401 W. 13th St., New York City

Gentlemen:

Please send me your catalog on sterilizers ( ) Spotlights ( )

Dr.....

Address.....



Great team-work

Great team-work, too, between the dentist and POLORIS—team-work that wins patients. For nothing builds up your practice so surely as does the absence of pain.

Use and prescribe both POLORIS products before and after all instrumentation. The Ideal Combination for the relief of pain in all cases.

POLORIS COMPANY, INC., 79 East 130th Street, New York City HY-1

Great team-work, yes! Please send me free professional supply of POLORIS DENTAL POULTICE and POLORIS TABLETS.

Doctor.....

Street.....

City.....*State*.....

My druggist is.....

"Since October 1930 I have been working with acetylsalicylic acid (aspirin) and submit the following observations:

1. It is an excellent analgesic
2. It seems to aid in healing
3. It is easily applied
4. It produces no ill after-effects"*

In these words the author refers to the topical use of Aspirin as a method of preventing or diminishing the pain of instrumentation in the treatment of periodontal disease.

Bayer-Tablets of Aspirin, taken orally, are used routinely in dental practice for the control of pre- and post-operative pain.

Bayer-Tablets of Aspirin have served both the medical and dental professions for over 30 years as an analgesic of high efficiency and excellent tolerance.

Professional samples of Bayer-Tablets of Aspirin are mailed regularly to dentists. If you wish to avail yourself of this service, drop us a card and we will be glad to add your name to our list.

BAYER ASPIRIN

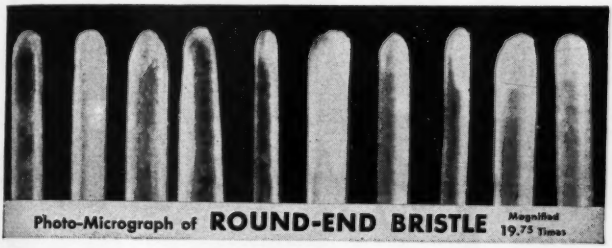
170 Varick Street New York

*LILLIAN BARKANN, *Dental Cosmos, July 1931.*

ROUND-END BRISTLE

An amazing new development Exclusive with

Pro-phy-lac-tic



These unretouched photomicrographs show the startling difference between ordinary, sharp, saw-tooth bristle and the new Round-End bristle. The micrograph above is of the new Pro-phy-lactic. The other is of a well known tooth brush purchased in the open market.

Which bristle would you recommend to patients for greater gum protection?

Pro-phy-lac-tic BRUSH CO., Florence, Mass.

ANSWER TO THE FIRST CRY

The first human cry in the wilderness was to summon aid for the relief of pain. Today, the first mission of medicine is still to relieve suffering. It must precede cure of the disease causing it.

In the service of pain relief, PERALGA has a commendable record. It alleviates pain and its nervous manifestations with desirable promptness.

Peralga obviates habit formation because it is not narcotic. Neither is it depressing in its effect: the patient can continue at his occupation after taking Peralga. That is why it is specially suitable in dental treatment and in chronic recurrent painful conditions, such as neuralgia and migraine.

Peralga is a fused combination of amidopyrine and barbital. It is supplied in tablets, in boxes of 6, 12, 50, 100 and 500. The tablets are packed in sanitape. The dose is one or two tablets with water. Trial quantity to dentists on request!

SCHERING & GLATZ, INC., 113 WEST 18th STREET, NEW YORK CITY

for HERPES LABIALIS
CAMPHO-PHENIQUE
Is the Improved Treatment

Instead of spirits of camphor for your patients who have "cold sores," try Campho-Phenique Liquid.

Besides the drying and healing action of camphor, Campho-Phenique provides the prompt antiseptic and analgesic action of phenol, with none of the latter's caustic or irritating qualities. Patients appreciate the soothing effect of Campho-Phenique, especially when painful cracks appear around the sores.

Campho-Phenique is excellent for all minor cuts, wounds, abrasions, burns, etc. It prevents and fights infections, soothes irritated areas, and promotes healing. Dentists use it routinely.

Try Campho-Phenique in your own practice. Samples and literature will be sent to you promptly upon request.

CAMPHO-PHENIQUE COMPANY OH-1
500-502 N. Second Street, St. Louis, Mo.

Gentlemen: Please send me sample of Campho-Phenique; also literature.

.....D.D.S.

.....St. & No.

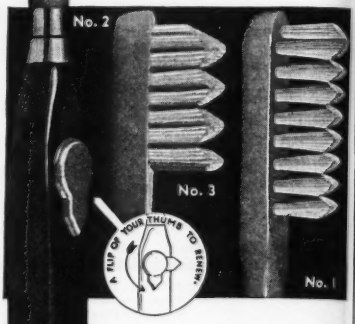
.....City.....State

"... and after every bad cold"

℞

TRU-BRISTLE RENEWABLE

(The *Prescription* Tooth Brush)



● **A dry, firm, sterile tooth brush is not only best for your patient's teeth and gums, but is also a good common-sense way to help them fight colds! And, Tru-Bristle refills are so inexpensive that worn brushes can be discarded frequently without "pocketbook-burden." Complete Brush 75c—refills 25c each.**

See special dental offer below.

Tru-Bristle Brush Co., Dept. B-136
5300 14th Ave. N.W., Seattle, Wash.

I enclose $____. Please send me:
____Tru-Bristle Renewable Tooth Brushes @ 50c each.*
____Tru-Bristle Demonstration Sets @ $1.00 each.* (Sets consist of 1 complete brush and 3 refills.)
Specify Style Nos. 1☐, 2☐, 3☐

Dr._____

Address_____

My prescription druggist is_____

*** These special less-than-wholesale prices made only to members of the dental profession and their assistants.**

CLOVER LEAF

the solution

to every plaster problem

No matter what you demand of a plaster or stone, Clover Leaf will satisfy your most exacting requirements, and no matter which of the five plasters or three stones you select, Clover Leaf accuracy, uniformity, and consistently high quality will insure your complete satisfaction.

XX Impression Plaster is an extremely quick setting plaster for impressions and emergency models for vulcanite work where very rapid set is essential.

Soluble Impression Plaster is convenient for use in difficult cases where there is any possibility of breaking the model when separating.

Standard Set Plaster, Laboratory Plaster and **Hard Plaster** are model plasters of exceptionally high quality.

Vulcanizing Stone, Model Stone, Laboratory Stone and **Cloverock** are very hard Stones, for laboratory use.

We shall be glad to send you samples of Clover Leaf products.

H. B. WIGGIN'S SONS CO.
Bloomfield, New Jersey

Please send me samples of CLOVER LEAF products.

Dr. .....

Street .....

City and State .....

Winter COMFORT for PROFESSIONAL HANDS

● Winter weather brings no worry about chapped, rough hands if you will follow this simple suggestion: Every time after you wash your hands just rub a drop of rich, wide-spreading Italian Balm on them.

This famous skin softener keeps your hands smooth and comfortable regardless of frequent washing, the use of strong solutions or winter weather.

Get an Italian Balm Dispenser for convenience and economy. Dispenses one drop at a time. Ask your druggist for the 59c Dispenser Combination Package or send ONE complete 60c Italian Balm carton (and 10 cents to cover packing and postage) or —TWO 60c cartons and NO MONEY—with your name and address—to CAMPANA, Batavia, Ill.

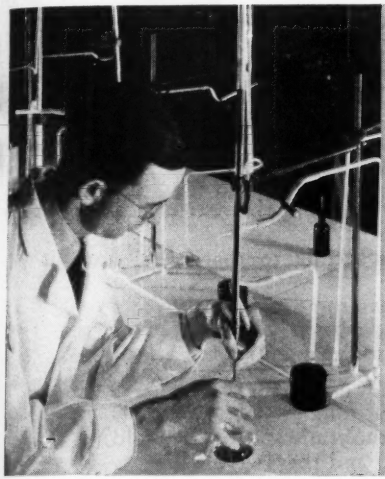
Campana's

Italian Balm

THE ORIGINAL SKIN SOFTENER

"America's Most Economical Skin Softener"

Merck SODIUM PERBORATE Flavored



IS PRODUCED UNDER RIGID LABORATORY CONTROL

EVERY lot of Merck Sodium Perborate Flavored is subjected to rigid tests before it can be released for packaging and distribution. High standards of purity and uniformity are maintained and these must be met or exceeded in the Merck Control Laboratory. Any Merck product which fails to meet these standards is rejected.

With this system of laboratory control, every dentist who prescribes Merck Sodium Perborate Flavored is assured that his patients will receive only a high quality product. He will know that the powder is always pure white; that it will dissolve quickly in water or saliva; that it contains no abrasives; that it is pleasantly flavored, dependable and safe.

Merck Sodium Perborate Flavored is on sale at drug stores in 2-oz. and 4-oz. tins.

Send for circular "Sodium Perborate in Oral Therapy" and suggestions for use in Vincent's Infection, Pyorrhea and Gingivitis. A box of samples will also be sent. Use the coupon.

● MERCK & CO. INC.
Dept. 11, Rahway, N. J.

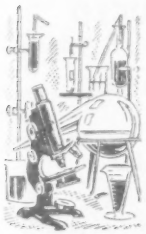
I am attaching my professional card (or letterhead). Please send office samples of Merck Sodium Perborate Flavored and literature.

Name.....

Street.....

City.....State.....

WISHING YOU A SCIENTIFICALLY SAFE and HAPPY NEW YEAR

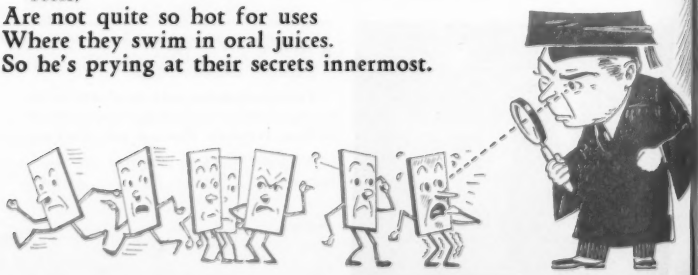


IF YOU think this Scientific Stuff's the "nerts,"
Please don't cling to that belief until it hurts,
For we have some facts to prove
That your practice you'll improve
If you'd just go scientific for a spell.

WE HEARD much some years ago, so you'll be told,
Of some metals euphemistic'lly called gold;
They were cheap and they were white
But today they're out of sight—
Just because old Science gave them merry hell.

EVERY time our old Prof aimed his microscope,
The white golds lit out for cover on the lope.
They disliked to be researched,
Lest their virtue be besmirched
So they fin'lly in despair gave up the ghost.

AND right now the Prof is looking hard at steels
And some other poor base metals, which, he feels,
Are not quite so hot for uses
Where they swim in oral juices.
So he's prying at their secrets innermost.



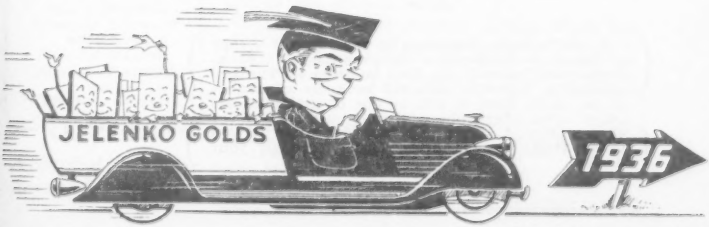
WHEN these metals heard the Prof was on their trail,
They got jittery and turned so very pale
That they're now our "Plat'num" blondes,
But their color corresponds
Much more closely to a metal known as chrome.

IF YOU think that dentistry's gone sour on gold,
Let us tell you that in '35 we sold
More cast gold than e'er before —
There's a fact you can't ignore—
If the good old days again you'd welcome home.

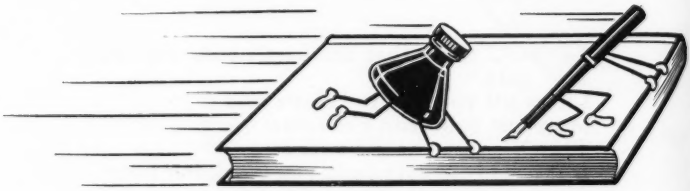
TO BE sure the golds we offer are correct,
They give just the service that you should expect;
They are flexible and strong,
Good for bridges, short or long;
They have everything that science says they need.

GET aboard our old band wagon with the Prof!
And with fine Jelenko Golds, hard times you'll scoff;
And the New Year, we vouchsafe,
Will be Scientif'c'ly Safe
And we'll all be going places, at top speed!

J. F. JELENKO & CO., INC.
Manufacturers and Refiners of Dental Golds
136 West 52nd St., New York, U.S.A.



And Bosworth keeps pace, too!



★

During the last 20 years of Oral Hygiene's quarter-century, an increasing number of dentists have been saving time and money by using Bosworth Bookkeeping Systems. Steadily improved, the Bosworth System has been keeping pace with dental progress. Now it steps ahead again!

Now we've "streamlined" it for you by reducing its weight to the minimum, and, by visualizing methods, have made it possible for you to record and find entries more quickly than ever before.

In a single binder, using only 3 different records, the newest Bosworth Bookkeeping System not only records appointments, but provides, also, a daily record of service rendered and cash received—an examination sheet—patients' ledger sheet—expense record—and both monthly and yearly summary.

This ONE binder carrying only 3 forms replaces the 4 binders and 9 forms furnished with the Bosworth Senior System. Thus you are saved time and money. And the price of the new visual system, complete, is only $12.50. Please ask your dealer (or write us) for more data.

If you've been intending to get yourself a copy of Harry J. Bosworth's 600-page book, "Dental Economics," now is the time to order it. The few remaining copies of this $10 book are offered at $3 per copy. Soon it will be out of print. Its 600 pages cover every phase of the business side of of dentistry. **A single page may be worth to you many times the $3 price.** Order through your dealer.

HARRY J. BOSWORTH COMPANY, 5932 Wentworth Ave., Chicago, Ill.

a real
PRECIOUS-METAL
ALLOY
at a new low price

STERN

HIGH QUALITY

H-L GOLD

LOW COST

● THE DENTIST OR TECHNICIAN that has tried it will seek no further. He will recognize it at once as the happiest solution to a most pressing problem confronting dentistry today—economy in dental golds *without the sacrifice of professional standards.*

This new alloy is distinguished by more than a rich gold color. Long, painstaking research and experimentation by STERN metallurgists have succeeded in giving it a combination of working-qualities never before attained with an equal content of gold and the platinum metals.

Equally suitable for one-piece castings, clasps, bars, saddles, as well as three-quarter crowns, full crowns, inlays, and Carmichaels, it nevertheless requires no special handling of any kind. And its resistance to discoloration compares favorably with that of high-grade dental solders.

Try this remarkable alloy on your next case. Its price is only $1.71 per dwt. (Based on I.P.A. price of $34.50 to $35.49 per oz.)—I. STERN & CO., Inc., 218 West 40th St., New York City.

The
STERN
Line

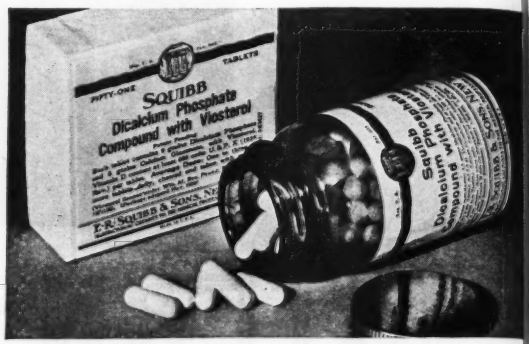
Cast and Clasp Golds
Shells and Disks
Gold Solders
Quality-Marked Wires
Plate and Filling Golds
Stern & McCollum
Removable Bridgework
Attachments
Precision Mandrels
Arrow-Head Lingual
Bars
Precision Backings

I S S

A Symbol of Precision in Manufacture

A great advance in

CALCIUM THERAPY



TABLETS CAPSULES Dicalcium Phosphate Compound *with* Viosterol Squibb

SINCE ORDINARY DIETS often contain an insufficient amount of calcium, the use of a supplemental source of this factor is frequently indicated. Dicalcium Phosphate Compound with Viosterol represents a distinct advance in calcium therapy, for it not only supplies calcium but phosphorus and Vitamin D. And these three factors are present in a ratio best suited for proper absorption and utilization.

Dentists will find Dicalcium Phosphate Compound with Viosterol excellent in building strong tooth and bone structure in children as well as in protecting the teeth of pregnant mothers against calcium deprivation.

Dicalcium Phosphate Compound with Viosterol Squibb is available in both tablet and capsule form. Each tablet contains the equivalent of 2.6 gr. calcium, 1.6 gr. phosphorus and 660 units of Vitamin D, U. S. P. XI. Tablets are supplied in boxes of 51.

Two capsules are equivalent to one tablet. They are available in bottles of 100.

Samples and literature will be sent to the Profession on request. Address Dental Department, 745 Fifth Avenue, New York City

E·R·SQUIBB & SON

An important contribution to

VITAMIN THERAPY

NAVITOL SQUIBB NATURAL VITAMIN OIL

GOOD GENERAL RESISTANCE and firm tooth structure are dependent in part upon an adequate supply of Vitamins A and D. Navitol—a new Squibb Vitamin Product—supplies these factors effectively and inexpensively.

The vitamins in Navitol are obtained from *natural* fish liver oil sources. Navitol is as rich in Vitamins A and D as halibut liver oil with viosterol and yet costs 40 per cent less. It is convenient to use and effective in small volume dosage. The oil contains per gram not less than 50,000 Vitamin A units, and 10,000 Vitamin D units. Ten drops (or one 3-minim capsule) supply 8500 Vitamin A and 1700 Vitamin D units, U. S. P. XI.

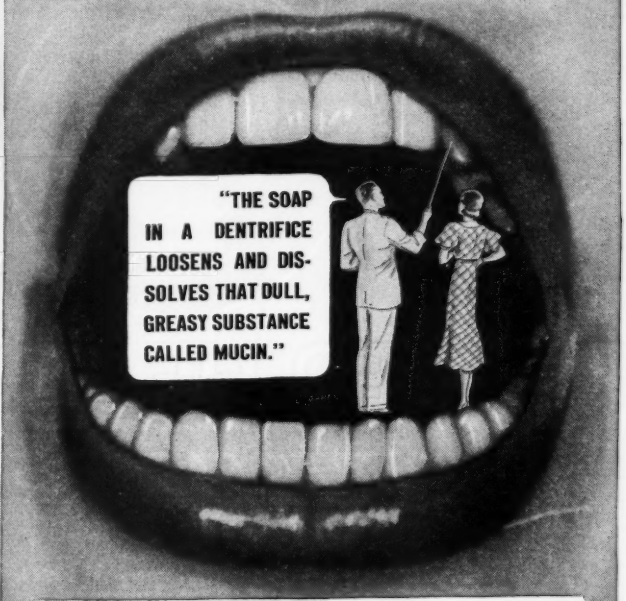
Navitol is available as follows:

5-cc. bottle of oil (with dropper)	$ .60
50-cc. bottle of oil (with dropper)	3.00
Box of 25 gelatin capsules	.75
Box of 100 gelatin capsules	2.50

Descriptive literature on request

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

"Doctor—why is soap used in a dentifrice?"



"You would not attempt to wash dishes without soap—soap in the dishwater cuts and dissolves the grease. So the special soap in Kolynos not only loosens and dissolves the greasy deposits on the teeth and mouth tissues, but, combined with other ingredients in Kolynos, it is an effective solvent of the protecting envelopes of the mouth bacteria and enables the germicides to act directly on the bacteria." 70B

PROPER HEAT

for BETTER CASTINGS

A RED SPRUE hole is always advisable for high heat casting technic.

A RED SPRUE hole assures a more thorough elimination of residual carbons.

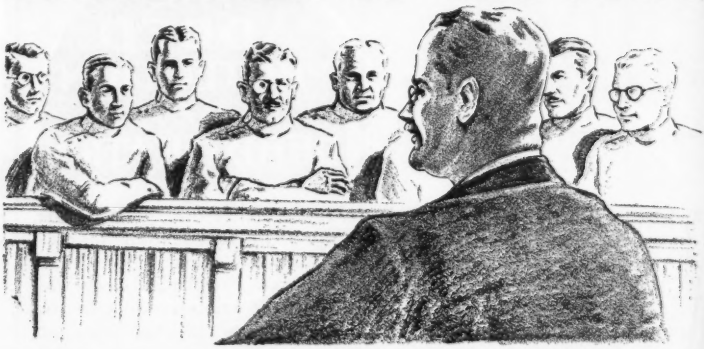
Having the sprue hole a RED at the time of casting assures best results.

When casting to embedded metals a RED SPRUE HOLE assures more perfect union between embedded metal and casting gold.

Write for "Proper Heat" Color Card sent upon request.

THE COLUMBUS DENTAL MFG. CO. Columbus, Ohio, U.S.A.

GENTLEMEN OF THE JURY:



HERE ARE THE SCIENTIFIC FACTS ON CEMENTS:

In The Investigation of All Zinc Phosphate Cements, conducted by The U. S. Bureau of Standards and The American Dental Association, FLECK'S CEMENT is identified by the letter "I". Reports of these investigations appeared in the Journals of the A.D.A. of November 1933 and 1934.

IT WAS PROVED THAT FLECK'S CEMENT WAS BEST IN:

SETTING TIME	MOST UNIFORM UNDER VARYING CONDITIONS OF HUMIDITY AND SLAB TEMPERATURE. (SEE TABLE 6)
TEXTURE	FINEST PARTICLE SIZE. (SEE TABLE 7—LETTER "I")
SHRINKAGE	INFINITELY LESS SHRINKAGE THAN FOUND IN OTHERS. (SEE FIGS. 5, 6 and TEXT p. 1978.)
STRENGTH	EXTRAORDINARY VALUE OF 19,500 lbs. PER SQUARE INCH. (SEE TABLE 4—LETTER "I".)
UNIFORMITY	UNIFORM QUALITY THROUGHOUT ENTIRE RANGE OF SHADES. (SEE TABLE 12—LETTER "I".)

FLECK'S CEMENT HAS PROVEN ITSELF IN MILLIONS OF MOUTHS!

"PROVED Best By Scientific TEST!"

FLECK'S CEMENT

MIZZY, Inc., Distributors • 105 EAST 16th STREET, N. Y. C

STEHLEY, INC., OF PHILA., PA.

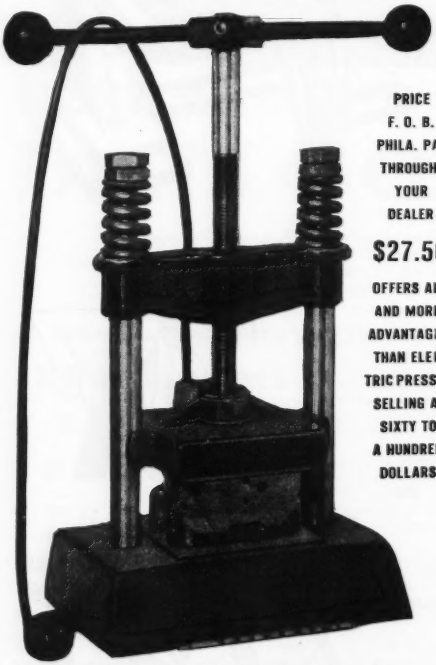
Announces The Latest In

IMPROVED—Scientific Denture Base Materials

Manufactured and Produced Only By Stehley, Inc.

DOCTOR—You will eventually use these products. Write for technical information and descriptive literature.

DR. STEHLEY'S DRY HEAT ELECTRIC PRESS



PRICE F. O. B. PHILA. PA. THROUGH YOUR DEALER

$27.50

OFFERS ALL AND MORE ADVANTAGES THAN ELECTRIC PRESSES SELLING AT SIXTY TO A HUNDRED DOLLARS

SPECIAL INTRODUCTORY OFFER

Dr. Stehley's Dry Heat Press
Dr. Stehley's No. 2 Large Flask
Dr. Stehley's 400° F. Thermometer
2 Dr. Stehley's ZELITE Blanks

(ALL FIVE FOR $30.00)
ASK YOUR DEALER SALESMAN

ZELITE

No. 1 and No. 2 Shades. A Super cellulose denture base material, Shade No. 2 being the most popular.

DR. STEHLEY'S "GOLD BASE" DENTURE BLANK

This blank is pressed under one operation, steam or dry heat, the "Gold Base" staying in the palate and translucent pink in the labial. NOTE—This blank is covered by U. S. patents. Refrain from infringements.

DR. STEHLEY'S "RARUCO" RUBBER

A scientific development of rubber pressed under dry heat. Many times stronger and lighter than rubber. Will not stain. Needs no vulcanization.

STECO TRIPLE STRENGTH RESIN

An all pink translucent resin that affords greater strength and beauty.

ZELITE PROSTHETIC CUTTERS

No. 1 Lathe Shank.
No. 2 Straight Head cutter.
No. 3 Pointed Head cutter.
No. 4 Round Head cutter.
By the use of these cutters over one-half time is eliminated, and the finishing is made a pleasure.

And here's a food that gives it!"

How many of your patients exercise faithfully to keep their bodies fit, yet overlook the all-important exercise that makes healthful teeth and gums? Plenty of them, of course. Well, doctor, here's a tip for handling them.

Tell them about Ry-Krisp! They'll go for these wafers with the hearty whole rye flavor. They'll eat Ry-Krisp because they like it. And Ry-Krisp in turn will give their teeth a natural workout, because its brittle crispness encourages thorough mastication, stimulates salivary secretions and stimulates the gums. Moreover, Ry-Krisp tastes great with any food at any meal — used as crackers, toast or bread. Prove it by trying Ry-Krisp yourself. We'll be glad to send you samples of Ry-Krisp Whole Rye Wafers and a copy of the Research Laboratory Report, without charge. Simply use the coupon.

RALSTON PURINA COMPANY
Dept. OH, 185 Checkerboard Square, St. Louis, Missouri

Please send me, without obligation, samples of Ry-Krisp Whole Rye Wafers and a copy of the Research Laboratory Report.

_____ D. D. S.

Address _____

Here's how to measure the quality of GARHART CEMENT

JUST work with it once. You'll see how easily it flows . . . how smoothly it mixes . . . how strong and dense it is . . . and how highly adhesive. Finally you'll see how little heat distress it causes and how promptly it sets. Garhart Cement comes in Light, Pearl-Yellow-Gray, Gold Brown and Special (for porcelain restorations).

Giant Size

14	portions	$10.00
6	"	5.00
1	"	1.00

Priced alike for plain or super-germicidal and Red Copper (25%). See your dealer or write for literature.

Garhart Dental Specialty Co.
Kendall Square
Cambridge, Mass.

ask her

AND HAVE NO REGRETS!

● Failures of restorations, investigations show, are a frequent cause of lost patients. Whatever else patients may desire in a restoration, there is one thing they naturally ***always want and ASSUME—permanence.*** And the lack of it, every patient is quick to condemn.

Of what use is anything else if a restoration ***has completely broken down?*** Of what use, say, a once pleasing color of a broken-down silicate? Or the lower cost of a broken-down amalgam? Or the fact that an inlay is partly made outside the mouth?

Surely nothing can take the place of permanence. And no patient, ***when offered a choice,*** is ever willing to sacrifice it unnecessarily.

It is fortunate for the public, and a credit to dentistry, that the realization of this fact is steadily growing. Restricting the impermanent materials to narrower fields, more and more dentists are getting back to Gold Foil—the **only** restoration that is known to stand up in the mouth for ***thirty, forty, and even fifty, years.***

Get further interesting data about this trend back to Gold Foil. ***Simply pin the lower portion of this page to your card or letterhead*** and mail to MORGAN, HASTINGS & CO., 817-21 Filbert St., Philadelphia, Pa.—Established 1820.

PATIENTS WANT PERMANENCE

Nothing can take its place!

NO FAR-FETCHED CLAIMS

PHILLIPS' Milk of Magnesia has been standard in the practices of physicians and dentists for over 60 years. The sustained interest in this product is a tribute to the rational claims and the consistent conservatism of the manufacturers.

THE introduction of Phillips' Magnesia Tooth Paste and Phillips' Milk of Magnesia Tablets suggests the following prophylactic regimen:

1. Phillips' Magnesia Tooth Paste to cleanse the teeth without abrasive action
2. Phillips' Milk of Magnesia to serve as an economical and effective mouth antacid
3. Phillips' Milk of Magnesia taken internally to combat acid eructations from "sour stomach"
4. Phillips' Milk of Magnesia Tablets—concentrated, convenient, palatable, portable. Can be chewed slowly to give prolonged effect.

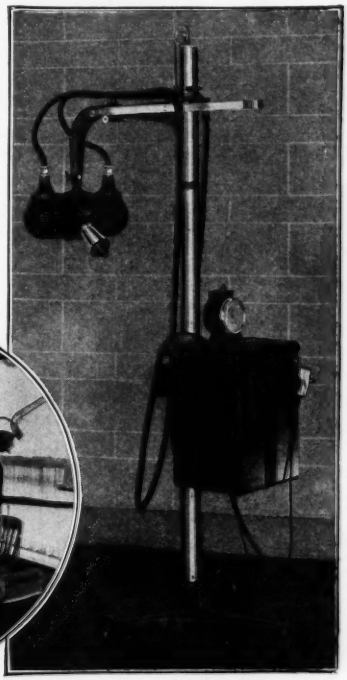
PHILLIPS'
Milk of Magnesia

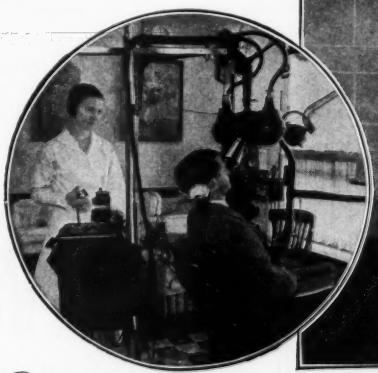
Prepared only by
THE CHAS. H. PHILLIPS CHEMICAL CO.
NEW YORK

FISCHER SHOCKPROOF "DENTAL-X"

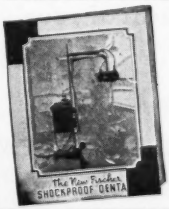
Equip your office now with this new income-producing unit under the FHA Plan.

YOUR own X-ray in your own office means added income from radiographs and from new work uncovered. An X-ray will prove your best business and good will builder. Moreover, under the FHA Plan, no down payment is required, terms are three years with exceptionally low carrying charges. Act at once. This is a very special opportunity.





The new FISCHER Shockproof "DENTAL-X" is a marvel of power and efficiency. Every position wanted obtainable while patient remains seated in the dental chair. Radiographs are superb. Get the facts today. Write or simply clip, sign and mail the coupon. Full information sent you immediately by return mail.



H. G. FISCHER & COMPANY, Inc. O.H.136
2323-2337 Wabansia Ave., Chicago, Ill.

I am interested. Please give full information regarding possible purchase of your new SHOCKPROOF "DENTAL-X," on FHA credit plan.

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Address.....

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A SAFE - CLEAN - ECONOMICAL RUST PREVENTATIVE

A sure preventative of rusting or discoloration of dental or surgical instruments when boiled in water. Keeps your instruments bright and new looking at all times.

NITROSOL is non-injurious to burs, explorers, scrapers, mirrors and rubber dentures. NITROSOL will not damage the cutting edges of steel instruments. NITROSOL will not evaporate, does not contain oil or form a precipitate.

NITROSOL is a recognized product with years of experience. Used by progressive dentists throughout the country.

4 oz. BOTTLE $1.00 . . . . . SOLD BY YOUR DENTAL DEPOT. if your order direct—please name your dealer.

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With Kelly's Paste you get a CORRECTED impression of highest accuracy that will last, without breakage or loss of detail, through to the final flasking. You can be SURE your adaptation is correct at every step. Widely used as a temporary reline in rebasing and duplication work. Standard package, $2.50 at dealers, unconditionally guaranteed. Try it; you can't lose. Kelly-Burroughs Laboratory, Inc., 143 N. Wabash Ave., Chicago, Ill.

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- BUSCH Burs are sharp and work smoothly and quickly under light pressure.
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- Try the gross assortment—8 dozen plain, 4 dozen cross cut fissure.
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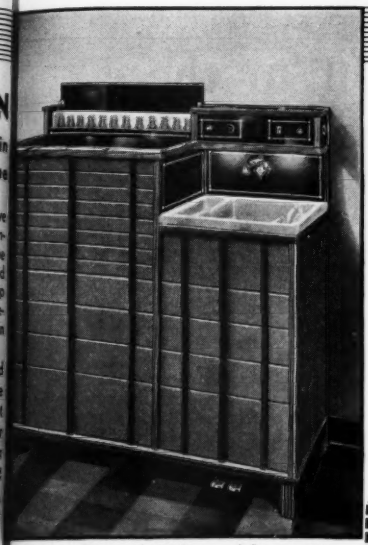


merican Dental Cabinet No. 144
E AMERICAN CABINET CO.
Two Rivers, Wis.

NOW—

IN 1936

ON ORAL HYGIENE'S SILVER ANNIVERSARY—

We feature the Super Dental Cabinet, No. 144. 25 years of continuous experience and advancement are reflected in its design and construction. Close application to the needs, and problems of the progressive dentist has developed scientifically planned features which have resulted in today's standards of appearance, convenience, cleanliness and proficiency. The No. 144 embraces them all. The coupon will bring you complete information.

THE AMERICAN CABINET CO., Two Rivers, Wis.
Please send the NEW CATALOG MANUAL D-1-36

Dr._____

Address_____

City_____ State_____

Steylite Denture Base Material Offers Greater Advantages

Longer color life, many, many times stronger than Resin or Rubber. Improved surface hardness with greater density, accuracy of finished denture, repairability, easy technic (requiring no tin-foiling with a long drawn-out tedious technic.) May be pressed under dry heat, steam or oil.

Thousands of dentists and laboratories now use Steylite Denture Blanks—the superior cellulose denture—sold through your dealer or direct at $6.00 per dozen. Supplied in upper and lower semi-shaped blanks. Technic and full information upon request.

Steylite Denture Blanks are as good as the best—you can't secure better at five time our price. Try Steylite now. Sample blanks, either upper or lower, prepaid fifty cents a blank. Money refunded if you are not better than satisfied.

Write now for full information to the

SUPEREZ CORPORATION OF AMERICA

Cumberland, Md.

My hat's off to these disgusted ladies!

An editor of a foremost women's magazine returned recently from a 13,000 mile trip throughout America. The object of the trip was to find out "what women think of advertising."

To use her own words, she found out "plenty!"

She discovered that a vast number of women in this country are thoroughly disgusted with much advertising.

My hat's off to these disgusted ladies. That's one reason I'm trying to make my advertising different. I've got something to sell just like everybody else, and I want you Dentists who have helped me build this business and conduct it along strictly ethical lines, to keep on prescribing Alkalol . . . but FIRST: I want your confidence.

FOR HEAD COLDS

I've made and sold Alkalol for more than 30 years. With the help of the Doctor's prescription pad this business has grown to international proportions. The one claim I make for Alkalol is that it is a soothing, cleansing, non-irritating saline solution that has certainly won its way on merit in treating head-colds, sore throat, sinus, tired inflamed eyes and other irritated membranes. Alkalol is not an antiseptic. Many antiseptics actually irritate and tear down the infected tissues. Alkalol soothes and heals infected tissue, never irritates.

WHAT DENTISTS SAY

This is the way I tell my story. From here on I'm going to let Dentists tell it. "Have used Alkalol at the chair for many years with excellent results" . . . "Am prescribing Alkalol almost exclusively a mouth wash. Its soothing, cleansing properties are very valuable, especially after extractions" . . . "Alkalol soothes minor gum inflammations—very effective in sore mouth conditions" . . . "Use it in a thousand and one different ways with great satisfaction" . . . "Excellent for teeth and mouth. Soothing and healing" . . . "Soothes my eyes immensely after the strong light at the chair" . . . "Wonderful for sore, tired eyes" . . . "After using Alkalol in spray bottles my patients say 'that is so refreshing!'"

SIMPLE TEST TELLS VOLUMES

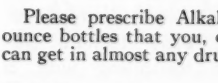
Let me send you a free eye-dropper bottle of Alkalol. Then try it in your own eyes. Alkalol has such a wonderful soothing, healing action on the delicate membrane of the eye that it has been used for years to clear the eyes of infants, after silver treatment.

Doesn't it stand to reason, Doctor, that if Alkalol has been so successful in treating such a supersensitive organ as the eye, that it must be equally efficacious as a douche or spray in coryza, rhinitis, etc.

●

Please prescribe Alkalol in 8 or 16 ounce bottles that you, or any patient, can get in almost any drug store.

(signed)



J. P. WHITTERS

●

Send your card for
FREE SAMPLE
Today

The ALKALOL Company
141-R Washington Street
Taunton, Massachusetts

FREDDY SCOTT, AGED 9, TOOTH MANUFACTURER

Yes, sir. Freddy, among other things, is a tooth manufacturer at present. He's making the teeth he'll live with as long as they are good enough to live with. And how good and lasting they'll be directly depends on his getting an abundance of what it takes to make straight, sound teeth.

Freddy's teeth very likely will be excellent. For his dentist wisely prescribed Abbott's Haliver Malt with Viosterol. Freddy likes its taste, too.

This outstanding product contains these essential factors for tooth, gum, and general health: Haliver Oil, Viosterol, Liver Extract, Pure Barley Malt Extract, Calcium and Phosphorus. It equals a very fine grade of cod liver oil in Vitamin A . . . is richer in Vitamin D. One teaspoonful furnishes as many Vitamins B and G units as one-third cake of moist, compressed yeast. It provides the important nutritional factors present in Liver and Malt Extracts and supplies some Calcium and Phosphorus. (Where intake of Calcium and Phosphorus is especially needed, prescribe in addition Abbott's Dulcet-Bar Dicalcium Phosphate.)

Besides aiding in the prevention of dental tissue defects, Abbott's Haliver Malt with Viosterol has been found valuable in treating established dental disease to assist in checking caries and preventing their recurrence. Supplied by prescription pharmacies in 8-oz. and 32-oz. bottles.

ABBOTT LABORATORIES
NORTH CHICAGO, ILLINOIS


LARGE SIZE
SQUIBB
Dental
Crea n
The antacid de tifrice
Contains Sq b
Milk of Mag ia
combined with s and
effective cleansi and
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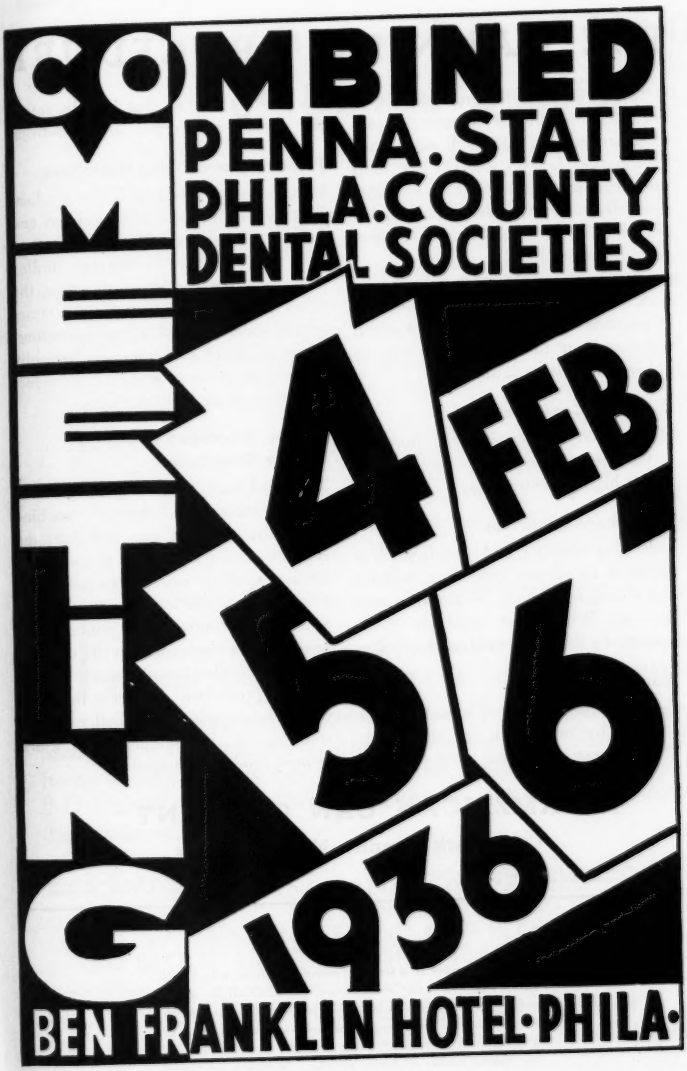
ANACIN has become the accepted dental analgesic because of its effectiveness and safety. Anacin does not contain amidopyrine, barbiturates or other harmful drugs. Your card will bring you professional samples.

THE ANACIN COMPANY • CHICAGO, ILL.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PENNA. STATE
PHILA. COUNTY
DENTAL SOCIETIES
COMING
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1936
BEN FRANKLIN HOTEL · PHILA ·

THE CANNING PROCEDURE

● Some misunderstandings exist as to the mechanics of the commercial canning procedures. Although some such information is available (1) (2), it is not surprising that the facts are not more generally known. The art of canning has been largely developed by, and retained within, the industry.

Of necessity, canning procedures vary with the product packed. However, it is possible to indicate in broad detail the treatment to which foods may be subjected during canning.

Cleansing Operations

Raw materials are given a thorough water cleansing, usually by washing under high pressure sprays.

Preparatory Operations

Following washing, undesirable stock is removed by sorting, trimming, peeling and coring operations, as occasion may demand. With some products these operations are performed mechanically.

Blanching

Certain products are "blanched" or scalded by immersion in hot water. This process serves not only to clean the product further, but also to soften the tissues and expel air therefrom.

Preheating and Filling Operations

Here practice varies with the product. Sometimes the food is precooked and filled into cans; again, it may be filled into cans and hot water or hot salt and/or sugar solutions added; still again, the filled cans are "exhausted" in a steam or hot water box. All these operations, the majority of which are mechanically performed, serve to preheat the product and exclude air from the cans.

Sealing, Processing and Cooling Operations

The filled cans are hermetically sealed on an automatic "closing" machine while the contents are still hot; the sealed cans are then heat processed to destroy spoilage micro-organisms; finally, the cans are cooled in water or air. Cooling contracts the contents and produces a vacuum within the can.

Such are the broad details of the canning procedure. We trust this brief word picture will bring better understanding of the treatments to which canned foods are subjected.

AMERICAN CAN COMPANY

230 Park Avenue, New York City

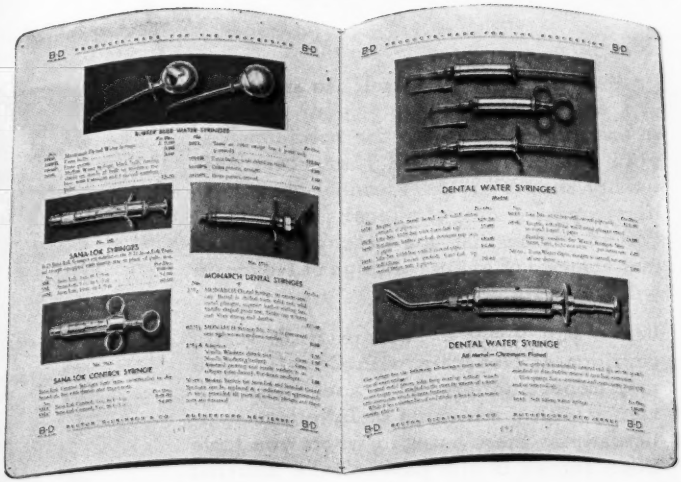
(1) 1924, Commercial Fruit and Vegetable Products, W. C. Cruess, McGraw-Hill, New York

(2) 1924, A complete Course in Canning, The Canning Trade, Baltimore

This is the eighth in a series of monthly articles, which will summarize, for your convenience, the conclusions about canned foods which authorities in nutritional research have reached. What phases of canned foods knowledge are of greatest interest to you? Your suggestions will determine the subject matter of future articles. Address a post card to the American Can Company, New York, N. Y.

DO YOU WANT

this new B-D CATALOG *of* Dental Specialties?



IT illustrates, describes and prices many dental specialties and diagnostic instruments for dental practice.

It is a convenient reference book for instruments professionally recognized as highly dependable. Some of the items shown in this book are listed below. If you wish a B-D Dental Catalog, without charge, just fill-in and return the coupon.

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AS UNIFRM

AS UNIFORM as time itself..in anesthetic efficiency..in safety to your patient..in enabling you to gain the confidence of your patient in you and your work. This quality should be the essential consideration in your choice of a local anesthetic..a consideration that is a watchword in the manufacture of every cartridge of Novocain with Cobefrin.

When you inject a Cook or R. B. Waite cartridge of Novocain with Cobefrin you may expect uniformity in anesthetic efficiency with a minimum of by-effects–particularly in those cases in whom you have been forced in the past to take unusual precautions against shock and syncope.

If you are not already using Novocain with Cobefrin in either Cook or R. B. Waite cartridges, try a box today. Accepted by the Council on Dental Therapeutics of the American Dental Association.

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The ANTIDOLOR MFG. COMPANY, Inc.
170 Varick Street, New York, N.Y.
Laboratories: Rensselaer and Springville, N.Y.

Carpule

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REG U S PAT OFF & CANADA

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Novocain, Reg. U. S. Pat. Off., Winthrop Chemical Company, Inc., Brand of Procaine HCl.
Cobefrin, Reg. U. S. Pat. Off., Winthrop Chemical Company, Inc., Brand of Nordefrin.

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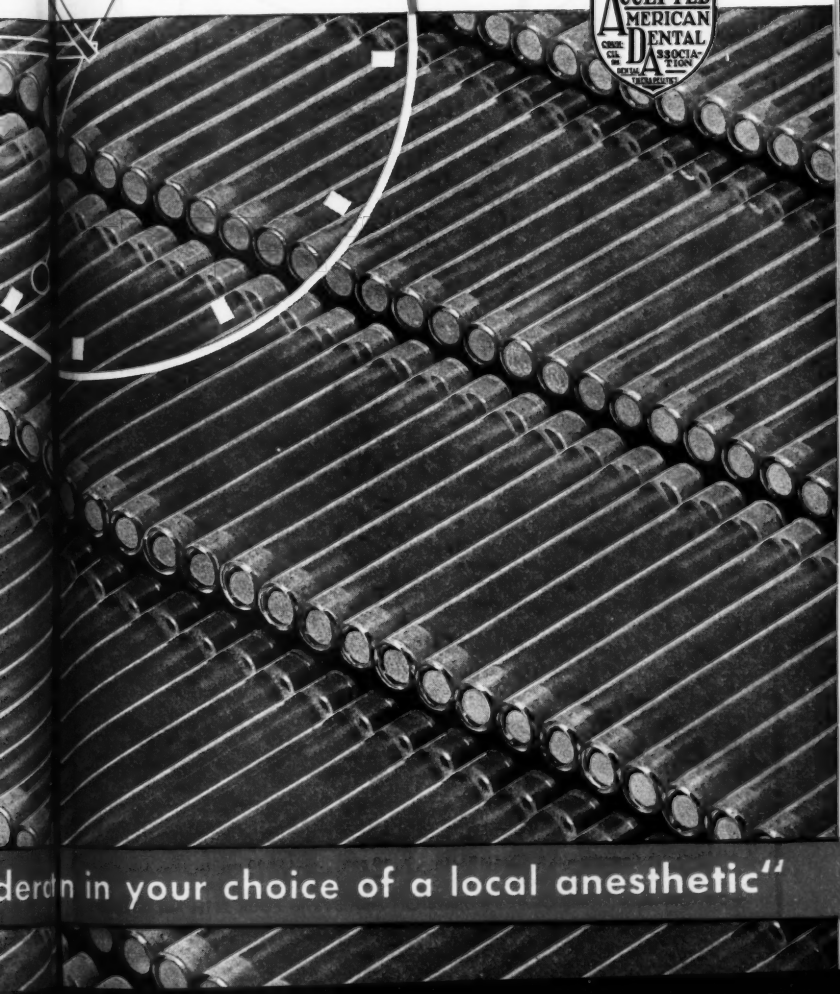
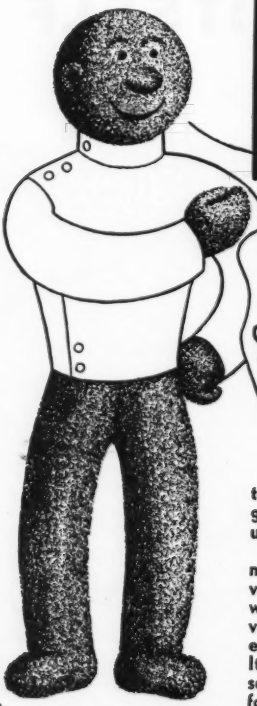


derdn in your choice of a local anesthetic"

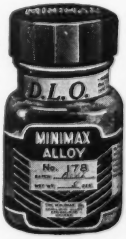
EVERY BATCH OF MINIMAX IS THOROUGHLY *TESTED!*



These testers are certainly tough! If **MINIMAX** *passes here "OK", you needn't worry about it in the mouth!*

Tough tests is putting it mildly—but we want to be sure first. Then we know you can have greater assurance of successful fillings when you use Minimax Alloy No. 178.

Minimax is *not* a finicky alloy. Its process of manufacture scientifically provides for all physical requirements when manipulated by your individual method. It meets all Federal and A.D.A. specifications. It supplies all the working and serving qualities you have wished for in your filling material.



When you buy Minimax Alloy No. 178 you purchase also contentment and the confidence that comes with the knowledge of certain results.

The MINIMAX COMPANY
Medical & Dental Arts Bldg., Chicago, Ill.

Minimax

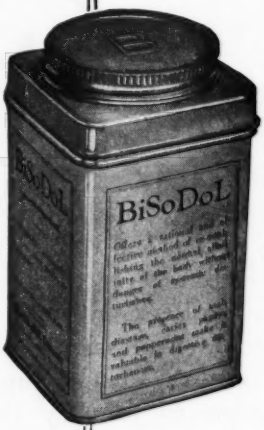
You Get More —You Pay Less

Fillings suitable for alloy-mercury gauges.
Complies with Revised (1934) A. D. A. Specifications No. 1.

1 oz. bottle..... $1.80
5 oz. bottle... $1.70 per oz.
10 ozs..... $1.60 per oz.
20 ozs..... $1.55 per oz.

★CONGRATULATIONS ORAL HYGIENE ON ACHIEVING YOUR 25TH MILESTONE!

TOOTH Protection IN PREGNANCY



● A dentist writing to the BiSoDoL Company refers to "the inevitable hypersensitiveness of the teeth" during pregnancy, due apparently to the "acidification of the saliva".

He has found that use of BiSoDoL in such cases gives far better results than the mere local application of alkaline mouth washes.

BiSoDoL Attacks "Acid-Mouth" at the Source

BiSoDoL, the balanced anti-acid digestant, helps to combat the most probable cause of "acid mouth", where local measures alone are ineffective.

BiSoDoL not only helps to neutralize effectively and safely stomach hyperacidity, but offers a valuable aid in so-called "heartburn".

NEW BiSoDoL MINTS

Pleasant-tasting, portable—for use at time of discomfort. Can be chewed or swallowed with water.

Write for Samples and Literature

The BiSoDoL Company
New Haven • Connecticut

BiSoDoL

70 SALUTES 25

Twenty-five years ago when Oral Hygiene first saw the light of day, Lee S. Smith and Son Manufacturing Company was proud to be numbered among its first advertisers.

Even twenty-five years ago Lee Smith was far from a new name to the dental profession.

Lee S. Smith bought out the dental supply business of M. E. Gillespie in January 1866. That's seventy years ago.

So on our own seventieth birthday we salute a youngster—twenty-five years young.

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Lee S. Smith and Son Mfg. Co.

7325 Penn Avenue · **Pittsburgh, Pa.**

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THE user of every product or service is the captain of his own ship. By his own choice he may gamble on the character of those with whom he deals and leave to chance the quality of the product he would use.

On the other hand he can follow those definitely charted courses that lead him with confidence and give him in return for every dollar a full measure of worth and satisfaction.

In dealing with Burton you follow a charted course, one that more than 29,500 dentists, dental clinics and universities have followed with safety for twelve years. In dependability, in design and in usefulness Burton Diagnostic Instruments, Operating Lights and Clinical Cameras are matched only by the excellent service which this company renders. Write for complete information about Burton products.

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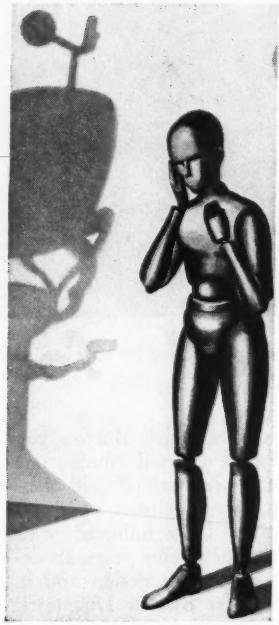
OVER 29,500 DENTISTS USE BURTON EQUIPMENT

YOUR PATIENTS WILL APPRECIATE *this* ANALGESIC



NOVALDIN possesses certain qualities which render it eminently suitable for dental practice. Owing to its rapid absorption, it relieves pain promptly and effectively before and after operative procedures and in neuralgias. The safety margin of Novaldin is so wide that it is well tolerated in large doses. In the published reports, the absence of by-effects, such as depression of the heart or respiration and disturbance of the stomach, is especially emphasized.

DOSE: Adults, 1 or 2 tablets . . . Children, ½ or 1 tablet

Write for professional package of 20 envelopes, each containing 2 Novaldin tablets, for use in your office practice.

Supplied in 5 grain tablets, tubes of 10 and bottles of 100

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Brand of DIPYRONE

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Pharmaceuticals of merit for the physician and dentist

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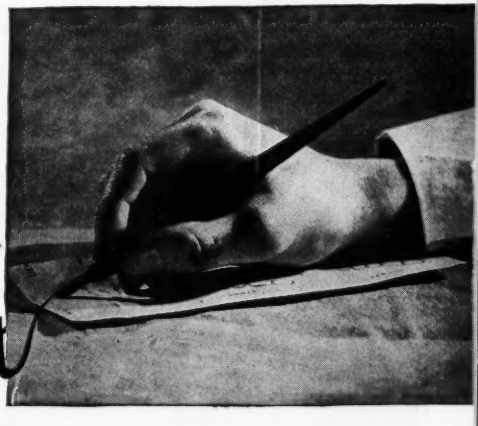
A HAND THAT'S FIRM ... A MIND AT EASE ...

AS HE WRITES—



"Make it with Multi-Cast"

TRUE, like many good dentists, in the beginning he was cautious about these "new-fangled" golds. But that was two years ago. Now, when he writes "Make it with Multi-Cast," his hand is firm, his mind is at ease. For now he knows that Multi-Cast has more than mere price to recommend it. He knows because he has tried it.

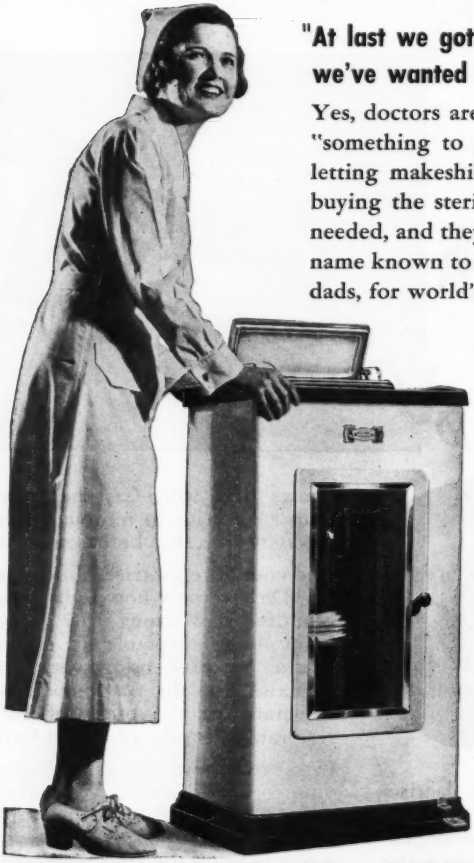
And you, have *you* tried Multi-Cast yet? Do *you* know how light, how beautiful, how strong it is? Do *you* know how adaptable it is—for inlays, for fixed bridgework, for partials? And do *you* know how moderate are the prices of gold restorations made of Multi-Cast?

Once you learn all these things you, too, will instruct your laboratory to "Make it with Multi-Cast." Over 250,000 cases in service today indicate the great popularity of Multi-Cast with the profession. Multi-Cast sells for $1.40 dwt., retail.

JULIUS ADERER, Inc.

NEW YORK • CHICAGO • CLEVELAND • BROOKLYN

A *Castle* REPLACES OUR OLD MAKESHIFTS



"At last we got the sterilizer we've wanted so long"

Yes, doctors are no longer shopping for "something to get by with", no longer letting makeshifts "do". . . . . They are buying the sterilizer they have so sorely needed, and they naturally buy Castle—a name known to them and to their granddads, for world's sterilizer leadership.

CASTLE "50" HAS:

1. Modern Beauty with recessed sterilizer.
2. China top—acid proof.
3. Sterilizing Safety.
4. "Full-Automatic", with Automatic Boiling Control and Automatic Cut-off.
5. Lifetime CAST IN BRONZE Boiler.

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Write for book
"Modern Sterilization"

WILMOT CASTLE CO.
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50 YEARS OF QUALITY LEADERSHIP

CASTLE STERILIZERS
Built by Specialists

So We Salute You Oral Hygiene!

The history of the birth and development of Oral Hygiene parallels the growth and progress of Revelation Tooth Powder.

The profession is quite familiar with the humble start of this company, 29 years ago, when August E. Drucker, chemist, perfected his formula and demonstrated its merits to dentist after dentist, traveling up and down the land.

Soon after Oral Hygiene was established, Mr. Drucker started using its pages to carry the story of Revelation Tooth Powder to the profession.

The phenomenal success of Revelation Tooth Powder is largely due to the widespread endorsement of dentists who have tested and recommended it to patients. We, therefore, salute you, Oral Hygiene, for the thorough manner in which you have delivered Revelation announcements to the profession through all the years.

AUGUST E. DRUCKER CO.
2226 Bush Street **San Francisco**

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Manufacturers of

REVELATION TOOTH POWDER

Your patients may not ask you...

but they need this type of Advice

PRACTICALLY every patient who comes into your office is in need of your advice on what to eat.

For example—the patient who has had several teeth extracted or because of dental disease, instrumentation or restorations has sore gums, for some time will find it difficult to chew solid food.

Then there is the undernourished child, with poorly calcified teeth, or the pregnant woman who still believes the old adage "for every child a tooth." Ovaltine adds materially to the calcium and phosphorus content of the diet as well as supplying an adequate amount of the antirachitic Vitamin D.

In many of these cases Ovaltine will help solve the diet problem and avoid the difficulty of obtaining proper nourishment, which is almost invariably an aftermath of dental operation.

Ovaltine is a food-concentrate, palatable, easily digested. It has all the food value of cow's milk, together with additional essential nutritive principles.

The Coupon Brings You Professional Samples

Send it in together with your professional letterhead, card or other indication of your professional standing, and some samples of Ovaltine will be sent you.

OVALTINE
The Swiss Food-Drink
Manufactured under license in U.S.A. according to original Swiss formula.

This offer is limited only to practicing dentists, physicians, nurses, dietitians

THE WANDER COMPANY Dept. OH-1
180 N. Michigan Ave., Chicago, Ill.

Please send me, without charge, some samples of Ovaltine for distribution to my patients. Evidence of my professional standing is enclosed.

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Address.....
City.....State.....

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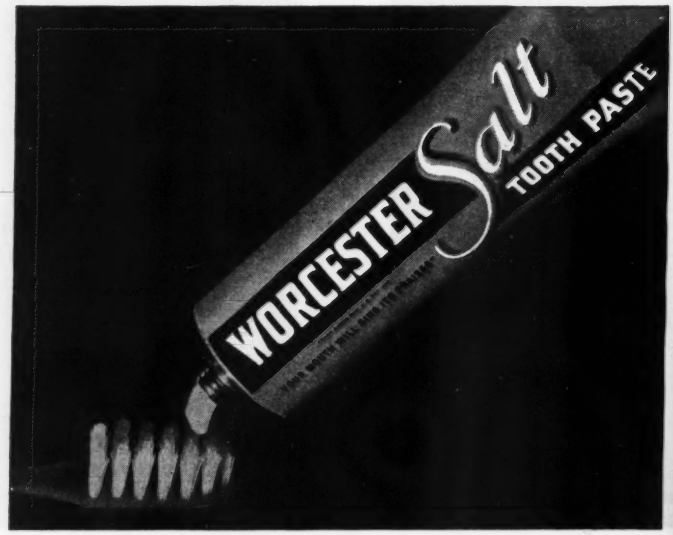

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